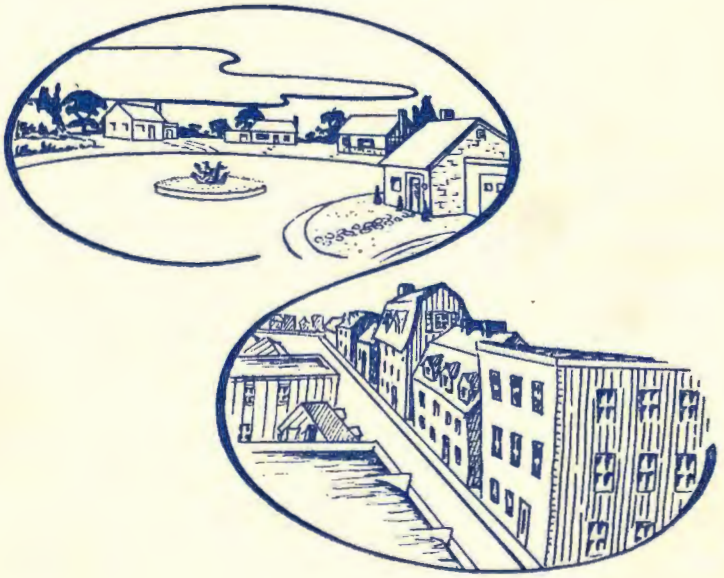
COMMUNITY PLANNING ASSOCIATION OF CANADA

COMMUNITY PLANNING REVIEW



Volume V, Number 4. Ottawa, December 1955

REVUE CANADIENNE D'URBANISME

L'ASSOCIATION CANADIENNE D'URBANISME

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Editor: ERIC BEECROFT

Volume V, Number 4. Ottawa, December 1955

COMMUNITY PLANNING ASSOCIATION OF CANADA

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Michelangelo's "Creation of Man", a section of the Sistine Chapel ceiling, is reproduced on page 127 from a photograph by Messrs. Anderson, Rome.

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SAINTE-MARIE DE BEAUCE

Terrains de jeux, vus du coteau. Le plan directeur conserve ce magnifique espace vert.

Playgrounds, seen from the hillside. The master plan preserves this magnificent green space.

The REVIEW is greatly indebted to Mr. Stewart Bates and to the Town Planning Institute of Canada for permission to publish this address which was given at the Institute's Annual Conference in Ottawa on November 18th, 1955. Mr. Bates is President of the Central Mortgage and Housing Corporation.

THE NEED FOR AN IDEAL

by Stewart Bates

You have suggested that I talk to you on "The Need for an Ideal". This is no easy assignment. In any subject, it is not easy to find the ideal, and still less to express it, as the modern world seems to ask, in some simple slogan. Even for life itself it appears difficult to find an ideal—or at least one on which we are all agreed. No heroic race would shrink from grief and woes, were it only assigned a noble task. But nature prescribes no tasks. She calls for no volunteers. She points willing climbers to no Everest. The discovery of the goal—the most difficult of tasks—she leaves to us. No road signs are erected by her. You choose your own path, uncounselled, at your own risk. Life is a unique experience, not to be purchased even with money. Yet, with this pearl of price, we know not what to do.

The search for life's ideal has exercised many men at many times and in many places. To find an ideal for town planners may appear much less difficult. But this will depend on how you define the subject itself. If the definition is made narrow enough, or if we think only of some part, like traffic management, no doubt an ideal can fairly readily be found. But the subject merits no narrow definition. I am going to frame it widely, and as an ideal I am not offering you a design. The purpose of town planning is no less than the achievement of a workable and inspiring setting for life itself: that is what I am going to suggest.

Two relations have always interested men, the relation between man and nature, and the relation between man and society. The latter relation still vexes us politically because of the inherently opposite processes in man on the one side and society on the other. Neither man nor society can live without each other: it is an unending marriage. Yet there remains an endless flux between the individual's need and feelings for freedom, and society's need for collective actions and responsibilities. And this age-long argument reflects itself within the modern city, whether that city be Tokyo, London or Toronto. Man adjusts himself to the city and at the same time tries to adjust the city to his purposes. The city itself is the instrument through which these adjustments of man to society are well or ill made, as the case may be.

The growth of a city has the same opposite processes going on. It reflects the search for individual freedoms on the one side and the imposition of conforming actions and manners on the other. It is clear that this is not easily planned, in any overall sense. We have abandoned the term "planning" in most of the social sciences. Perhaps the term has unfortunate overtones in the public discussions of town planning. It makes the process sound too simple or too bureaucratic.

In part you are bureaucrats, committed to the daily task of moulding things into standard and uniform patterns. But in part also you are designers and humanists trying to release people from the tedium of the mass-produced city. These aims are no more in conflict than are sleeping and waking. Your codes and standards cannot remain dormant or they will add to the sterility. You are doers of daily things, but also thinkers of future things, moulders also of things to come.

The city, as a concept, should not be over-simplified. It is a social complex—out of geography, economics and history, containing within it the decisions of nature herself and those of myriads of men, many long gone and many of nationalities other than our own. It is certainly a rich complex. If we look at the modern city as outside observers, as superior spectators, we must admit that the city, seen from the stalls, makes a fine play. The theatre is an imposing edifice with its high towers, its many splendours, its great varieties. The scenery is excellent, the plot is intriguing and full of incident, the characters numerous and charmingly varied, the acting wonderfully realistic and convincing. To disapprove of the modern city as a spectacle is to be hypercritical, although one admits that the spectacle excites both wonder and disgust. As a passing show it leaves little to be desired and is probably as well worth seeing as any

other staged in the Universe, either now, or in the recent or remote past.

We are, of course, not always observers. We are not looking at it through an opera glass. We are doers and sufferers on the stage itself, and there we feel its tensions more keenly, sometimes even sharing its delirium. Often it appears a smoking whirlpool where there is small standing room for logic. In this cataract, in this bewildering commotion, our mortal minds are a little aghast. And if you, for any moment, allow humanitarian ideas to enter the mind, the city immediately shows another aspect: a hateful scene of vice and violence.

Human thought trying to envisage such a miracle has an inherent weakness. The thing is too variable, too dynamic, too infinite in its aspects to be easily comprehended. Unless these features can be pigeonholed and docketed into parts of the whole, we cannot truly grasp it, and so we resort to talk of occupations, habitations, recreation and transportation, as if the total of these made up the city.

Please do not ask me to give a unified vision of the city that the city itself will not provide. It provides disunion, separateness, multiplicity, incessant change—a kind of chaos with everything at odds, one energy against another, growth against decay, men against men. It is indeed tempting to over-simplify this kind of organism —not made with the marvellous hand of nature but only with the apprentice hand of man.

This social complex cannot be idealised in a single notion. Despite the armchair philosophers, the relations of the One and the Many are not so simply drawn. You cannot think of the modern city as if it were an enlarged copy of an English village. Its mere size creates new kinds of opposites in wealth and poverty, virtues and vices, freedoms and frustrations. Before I sit down surrounded by the good books on this subject, to read the attractive essays on aesthetics, I am sure I should walk abroad more through the cities and accommodate myself to their bewildering variety. How pale some of these book drawings appear beside the passions and intrigues, the hatreds and ambitions, the glitter, the pageantry and poverty of the vast city. The books seem to avoid some of this; indeed, they seem to prefer the lukewarm emotions. The model cities have a preference for the decencies—perhaps even a preference for the tepid.

Probably before being committed to any theory, we should, after the manner of the artist, make some preliminary studies. Perhaps get views on town planning from angry souls in underground dwellings, from the cynics, from those who have to undergo the risks of driving after a night of roistering and carousing, from those who like quarrelling and gambling. Perhaps if one wishes to know the city, one should enquire into its luxuries and frivolities. Where the heart is, there the money goes.

Clearly, there are many aspects of city life to be considered. I mean that cities—their temples and cathedrals, statues and factories—have not all been built by saints. The rough riders have had a hand in it too. The city is a social complex to be seen through many eyes.

But if that were not enough, the scene refuses to stay still long enough to be photographed by these many eyes. The city is never at rest. Like the sea, it is untamed, moody and capricious, and contains many forms of danger to body and soul, and many forms of death to body and soul. Like the sea, the city can lay a spell on you. It too has its sheltered lagoons and quiet havens. It is in eternal flux, filled with ceaseless hostilities and ill-made compromises. Within it, the lovely has no priority over the vile, nor wisdom much advantage over folly. The most compelling feature of all this complex is that it lives. To alter it, to shape its history, to help direct its many undertakings, is difficult. The city is a heritage which no generation has a right to exploit. It has to be restored, re-created, refashioned for present and future enjoyments. And your profession has a hand in the game.

The perfectibility of the city is not too difficult to imagine. Miracles, once the province of the Church, are now performed by the State. We can be sanguine enough to believe that the State (Federal, Provincial, Municipal), can perform a new miracle on the cities. But what miracle? The new Garden of Eden will be decent, safe and sanitary. There will be good roads and lots of parking places wherever you stop. Water, sewage disposal, sanitation, humane slaughtering will all be adequate. There will be unstinted soft drinks, both on television and in the shopping centres, and the best of school buildings, free concerts and libraries. The materials are easily put together. But will there be far horizons and invincible hopes? Men, in all times and places have had thoughts beyond this materialist kind of Utopia—thoughts that wander through eternity to projects unattainable in time. The world's griefs are not just economic. It is fairly easy to see how to fill the world's empty stomachs. But consider the more intricate problem: the filling of empty hearts.

Can we think of our cities in such terms? Or are we indeed so reformed that we see men sitting for ever at their bungalow doors, festooned with honeysuckle, with the refrigerator filled with beef and beer? Such an orderly world is not to everyone's mind. Some would prefer a disorderly world as vastly more interesting. The last and greatest insult one can offer the human race is to regard it as a herd of cattle to be driven to your selected pasture.

Must we look forward to wholly conventional living in our North American cities—lives all alike, like a colony of ants, in standardised buildings, standardised subdivisions—places where all men think the same thoughts and pursue the same ends? This is the kind of ideal that seems to prevail among us—governments, builders and

planners. This is the sort of environment we seem to want for ourselves and our children. If environment has any influence on character (and you had better agree with me that it has, or your profession becomes pointless or no more than a mere engineering operation), the one we seem to be providing has severe limitations. It seems aimed at diminishing the individual. These subdivisions look like a calculated attempt to imprison the human, to force him into a mould that you or we or some builder or some architect thinks good. I have enough faith in the human spirit to believe that on this rock of regimentation, of standardised existence, the poorer plans will eventually shipwreck. There is a rebel in every man. Sooner or later, the individual and the nation have in the past refused to surrender themselves to a dictated felicity, to satisfactions chosen for them. There is, happily, in mankind a broad range of vision, a passion for ideas and ideals far removed from the immediate surroundings. As well as this vision there is happily too, a natural love of the lovely. And these two gifts are always ready to prevail.

It is these simple things that give point and purpose to your profession. If you help produce a good environment, men will recognize it, admire it, want it, and will ask you to produce more. These two basic qualities—men's range of vision and the love of the lovely—are always there, waiting to be satisfied, waiting to be stimulated. By birth, men are in some part artists and fashioners of worlds. It is this very romance of life that presents you with the golden chance. The environment of our cities, however great the spectacle, becomes more and more dehumanized, depersonalized. The cities and the suburbs more and more seem to show a lack of vision, an unawareness of the lovely, an air of having given up the struggle for the best. The cities of the Western world reveal the malady of our times—the malady that little seems worth attempting, the attitude of "I couldn't care less".

We are all creatures of our time and country. Each of us would be a different kind of individual had we, with the same minds and bodies, lived a thousand years ago. In our time, however, we have seen empires dismembered and destroyed. We have witnessed the collapse of ancient monarchies, the flight of kings. New Caesars have come and gone. We have seen materialize out of the unintelligible books of a scholar named Marx an idea that rent the world.

Of perhaps more significance, and alongside all these, we, in our time, have seen the final emergence of a new religion. We now present ourselves at the Vatican of Science and it promises a hell-fire here on earth that surpasses the hereafter vouchsafed for sinners only by the mediaeval church. But the new religion does not satisfy. Has it anything to say about justice and injustice, about the beginning or end of things; anything to say about the destiny of the human race, about ethics or conduct, about international relations; anything about human will, about love and hate, and revenge? The Vatican of Science is surprisingly silent on all these.

Is it any wonder that our world suffers disenchantment, that the divine arts are partially subdued by disillusionment, that our times express a weakening of thoughts and feelings, our structures and ways a decline of humanization?

This phase will shortly end, as it has before, and a springtime of enthusiasm will refresh us again. People will get bored with disillusionment. They will realise that integration takes more intelligence than analysis, and that we have to spend more time again on the former than on the latter. They will not continue to let their brains go to their heads. Thoughts and emotions will again have a place; they will be condensed and made effective again, and hope will spread. In your field you have had, for example, Gropius. That wild swan, the human soul, has revealed through him a new faith, a new set of tendencies in our time, a new emphasis on the positive values of life, a new sympathy with man and nature. And he is not alone. This kind of work is the struggle for the best. But even more important, it is not an ideal on paper. It is being achieved. You can be confident that human nature is such, in its vision and in its loves, that it will quickly recognize the improvements you make. Men, and much more so, women, constantly dream and plan how to improve their surroundings. They need help, and the time is as ripe for you as it was for Marx in a different way. It is ripe for the humanization of the cities and the suburbs.

Major achievements are awaited from you. On rare moments in human history, men have felt a breath of summer air. Life has seemed full of zest, overflowing with exuberance: men seemed ready to welcome all company and every undertaking with huge delight: they pushed their fortunes, took risks and acted with conviction. This time will come again. Our modern, highly ordered environment, its standards and its ways, fail to encourage such verve and such spirit. Perhaps you have a major social responsibility to help change this. Nothing has been accomplished by resignation, by the willingness to put up with anything. If you hold states, civilizations, arts and sciences worth the building, your profession has to enter the field of battle, and be prepared to add something new to the capitalized experience of the generations that have gone before us. You will make errors, but you will work wonders. You will fight the tedium, the ugliness, the narrowness, the commonplace business approach. In short, you will recreate a humanization of the cities and the suburbs. That is your contribution to the great experiment of existence; that is your duty, to see that this experiment continues, and on a new and grander scale. For success, governments, people, firms have to be convinced that the end, and the means you find towards

it, are worthwhile: and they will be convinced, as each success you have finds its quick admirers.

This puts a high responsibility on planners. You appreciate that I think of you not as mere engineers, mere architects, mere social workers. You are and must be, a team of all these, but you must be more. "You cannot make war with a map", said Chatham. You cannot make town plans with a design either. Your purpose is no less than the achievement of a workable and inspiring setting for life itself, for all its infinite variety. "We must not obey", said Aristotle, "those who urge us, because we are human and mortal, to think human and mortal thoughts; in so far as we may we should practise immortality, and omit no effort to live in accordance with the best that is in us." In short, I expect you to so help alter the setting of the second half of this century that we may seem as interesting to the gods as they are to us.

In thinking of your daily practice, perhaps of the subdivision that you have to plan tomorrow, these remarks may be less than helpful. They are a reminder, though, that your profession has to be one of high endeavour. The subdivisions, the bungalows, the streets last for a long time, far longer than most articles in current production. Your profession therefore has a responsibility for looking farther ahead than most. Mankind differs from the rest of God's creatures in that he frequently works for a future he will not see. This requires faith and hope on his part, and charity on the part of the next generation—faith and the hope that you can produce something that will look worthy fifty years from now, and charity from our successors when they appreciate our efforts to serve their unknowable ends. This is obviously more than a matter of patterns of streets and the like: these designs are the final instruments through which the ends are achieved, and these instruments should emanate from the elementals themselves. Good town planning is not simply a matter of brainwork: it is essentially one of thought and feeling, suffused with the love of humanity and the love of freedom.

I agree that it is difficult to plan a single subdivision with such thoughts in mind. It would be more satisfying to plan a new town or replan the whole centre of a city with such long-range thoughts. True, and public opinion has to learn that this is so. Then you will get the chance to do the larger projects, to infuse them with humanism and to leave a better, more hopeful heritage. This does not mean that the small subdivision is not worth treating with high seriousness. It is. You are the doctor diagnosing the individual case and making your prescription for the town councils or other elected persons. That prescription must not come from a partial diagnosis only; the health of the whole man has always to be considered. The partial pattern of a town has to be seen with the whole, not only for today but into the future. The abbé who tended the famous pictures in the Vatican for fifty years, and who had seen his friends and acquaintances one by one leave this life, reflected that the Michelangelo paintings were after all, the real substances, and we were but the shadows. Your profession has a work of some substance ahead of you!

L'article qui suit est tiré d'une conférence prononcée par M. Jacques Simard, maire de la Ville de Préville, lors du Congrès des Commissaires Industriels à Ste-Agathe, P.Q. le 12 octobre 1955.

QUELQUES PROBLÈMES D'URBANISATION Y A-T-IL UNE SOLUTION?

par Jacques Simard

On entend généralement par urbanisation ce phénomène par lequel l'homme tend à se rapprocher de l'homme pour former une agglomération dense qui, tout en satisfaisant son besoin de vie commune, pose, à cause de cette densité même, des empêchements à la vie communautaire qu'il faut à tout prix résoudre.

Ce phénomène n'a pas toujours existé; il semble, en effet, qu'avant la révolution industrielle, la ville, à quelques exceptions près, était bien plus à l'échelle de l'homme, ce qui veut dire qu'on se connaissait, que les échanges sociaux s'opéraient librement, même s'ils étaient stratifiés.

Mais un beau jour, Denis Papin trouve le moyen d'utiliser la vapeur et sa marmite cause une véritable révolution dont les lignes de force n'ont pas fini de s'étendre dans les domaines de la science, la technique, les relations humaines et par contre-coup la morale.

Le pouvoir de la machine, pour ce qui nous regarde, s'étend comme un aimant attirant de partout la limaille; il faut la nourrir, d'où mines de charbon, centrales électriques; il faut utiliser son immense pouvoir, d'où les industries, les manufactures; il faut répandre sa production, d'où les magasins, etc. Résultat: une concentration inconnue jusque là.

Bien plus, au problème de concentration suscité par la machine, s'ajoute celui d'expansion inhérent à l'automobile.

Or, dans notre bonne province, nous en sommes encore à peu près à ce stade de notre évolution industrielle. D'un peuple en général ancré à la terre, aux mœurs patriarcales, nous sommes à nous industrialiser rapidement. Le problème que l'Angleterre a connu depuis longtemps et qui l'a amenée à créer des *New Towns* est le nôtre aujourd'hui. Socialement, la famille "patriarcale", où l'ancêtre ayant fait souche divise son patrimoine qu'il lègue à ses descendants, est remplacée par la famille dite "conjugale" sans souche, possédant une maison pour la revendre si le prix est bon, si son travail l'appelle ailleurs, ou si la famille augmente, ou même si elle diminue.

Un autre phénomène datant de l'après-guerre vient ajouter au désintéressement du citoyen pour la chose publique. La loi des cités et villes (*art. 124*) décrète que le citoyen qui veut se présenter devant l'électorat doit posséder $600 de valeur foncière nette.

Or, le système qui permet d'acquérir une maison avec une modeste mise initiale fait que dans la majorité des cas, l'hypothèque sur la maison est plus élevée que l'évalution municipale.

Le résultat est tel que dans les villes neuves il y a une véritable pénurie de candidats aux charges municipales.

On comprend facilement alors que, désintéressé de la chose publique, sans désir pour la solidité de sa maison qui n'est qu'un abri temporaire, le nouveau citoyen soit la proie du spéculateur et que la surface plus que le fond ne l'attire.

Pas surprenant que la construction domiciliaire, depuis les dix dernières années, se soit révélée extraordinairement mauvaise d'après l'analyse critique d'une Université bien connue. Le milieu? Si ça ne fait pas, on déménage!

L'augmentation incoercible de la population des villes; leur extension à la périphérie; le désintéressement presque total du citoyen, voilà les problèmes contemporains.

Le corollaire répugnant à la démocratie, on le devine, c'est que l'individu ne jouant plus, il est du devoir de l'autorité de planifier pour empêcher le chaos qui, hélas! n'est pas un rêve, une lubie, car il s'étale partout.

Si nos villes doivent se préoccuper d'urbanisme, voyons d'abord ce qu'elles peuvent faire avec les instruments de travail à leur portée. Dans une causerie à la radio,[1] l'honorable Ministre des Affaires Municipales, M. Yves Prévost, résumait en connaissance de cause les pouvoirs légaux sur lesquels les conseils de ville peuvent s'appuyer et il n'y a pas de doute que nos lois permettent, même si elles n'obligent pas, d'entreprendre une foule de choses utiles.

Voyons comment on pourrait procéder à l'intérieur de ce cadre légal.

[1] *L'urbanisme est-il possible avec les lois existantes?* 13 janvier, 1954.

Il est essentiel, comme dans toute entreprise,[2] de se fixer un objectif: S'agit-il de corriger ou de créer? Doit-on voir 5 ans en avant ou 25 ans? Le but est-il uniquement d'attirer l'industrie ou d'intégrer cette dernière dans le plan urbain? Si l'objectif est limité, peut-il être confié à un employé ou doit-on faire appel au spécialiste? Etc.

Inutile d'insister sur l'évidence que plus l'objectif est lointain ou général, plus les prémisses sur lesquelles s'échafaude le tout doivent être serrées, précises.

L'inventaire selon l'envergure de l'objectif, devra, dépassant tout d'abord les bornes municipales, s'assurer du rayonnement de son noyau commercial; estimer l'étendue de son influence (journal); établir la courbe de sa population, sans négliger la division homme–femme; compiler la densité de la population; probablement faire des comptages de trafic, etc.

En connaissance de ces faits, un dossier aussi complet que possible sous les titres suivants, devient essentiel:

COMMUNICATIONS

1. Les voies
   - (a) les ponts
   - (b) les approches
   - (c) les grandes artères
     - nord-sud
     - est-ouest
   - (d) les rues
2. Les transports publics
   - (a) les chemins de fer
     - passages à niveaux
     - bruit
     - fumée
   - (b) les autobus
     - service régional
     - compagnies privées vs C.T.P.
   - (c) les avions
     - bruit
     - hauteur de vol

SERVICES PUBLICS

1. L'eau
   - (a) les aqueducs
     - sources d'eau possible
     - répartition financière
   - (b) les conduites
     - réseau adéquat
     - pression convenable
2. Les égouts
   - (a) les renvois
     - eau de surface
     - eau ménagère
     - le traitement
   - (b) les conduites
     - réseau adéquat
     - les pompes
3. Les vidanges
   - (a) service
     - collectif–(coopérative)
     - soumission
   - (b) disposition
     - incinérateur
     - "reclaimed land"
4. Les pompiers
   - (a) service
     - volontaire
     - rémunéré
   - (b) site
     - poste central
     - décentralisé avec centrale d'appel
5. La police
   - (a) site
     - poste central
     - décentralisé avec centrale d'appel
   - (b) justice
     - cour du recorder
     - prison
   - (c) secours
     - "first aid"
     - ambulance
6. Inspections
   - (a) sanitaires
     - nourriture
     - logement
   - (b) contre le feu
     - éducation
     - liaison avec compagnies d'assurance
7. Evaluations
   - (a) personnel compétent
   - (b) statistique régionale

CONTRÔLE DU SOL

(Plan d'aménagement, plan directeur)

1. Rural
   - (a) analyse du sol
     - Terre noire (céleri)
     - terre sablonneuse (tabac)
   - (b) terre à culture
     - fiscalité appropriée
     - coopératives, etc.
       - non subdivisible
       - non aliénable
2. Urbain
   - (a) zonage
     - général
     - particulier
   - (b) décentralisation
   - (c) espaces verts
3. Voirie
   - (a) contrôle du "ribbon development"
   - (b) des approches
4. Affiches
   - (a) panneaux isolés
   - (b) panneaux sur les murs

[2]Il ne faut pas perdre de vue que cette entreprise se chiffre à plusieurs millions! Voir l'évaluation municipale.

AMÉNITÉS

1. Conservation
   (a) les bois
   (b) les cours d'eau
   (c) les montagnes
2. Plantations
   (a) dans les futurs parcs
   (b) le long des routes
   (c) dans les espaces verts
3. Esthétique
   (a) aménagement des points de vue
   (b) traitement des routes au point de vue scénique (contrôle de l'horizon)
   (c) traitement des rues (comme allées de jardin)
4. Loisirs
   (a) Les parcs publics
   bord du fleuve
   piscine
   (b) les sports
   aquatiques (marinas)
   stade de baseball
   (c) terrain d'exposition

ÉDIFICES PUBLICS

1. Santé
   (a) hôpitaux
   (b) cliniques
2. Éducation
   (a) écoles primaires
   (b) écoles supérieures
   (c) arts et métiers
3. Bien-Être
   (a) crèche
   (b) refuge
   (c) maison pour les vieux
4. Culture
   (a) bibliothèque
   (b) musées
   (c) salle publique
5. Administration

Toujours sous le guide de l'objectif fixé (mais rien n'empêche de l'élargir avant d'aller plus loin) il s'agit de tirer parti de la documentation pour le perfectionnement *physique*: soit la partie 3 dimentionnelle; *économique*: soit ce qui regarde la finance de la ville comme le niveau de vie de ses habitants; *social*: soit l'encouragement des rapports humains aux niveaux loisirs, culture, religion.

Ce n'est qu'après avoir longuement mûri les connaissances apportées par l'inventaire qu'on arrive à faire des plans précis pour l'avenir – soit le plan d'ensemble qui permette de passer à l'action.

Cette action qui consiste surtout en une utilisation optima du sol, exigera des règlements de zonage, des règlements de construction et autres règlements qui découlent de ceux-ci.

Dans le plan où les voies de communication sont dressées on procédera autant que possible à la création d'unités de voisinage, c'est-à-dire, un groupement de maisons autour des écoles, des églises, des magasins, des espaces verts. En tenant compte de la densité de population à obtenir, les lots à bâtir auront une surface X avec des espaces minima de chaque côté de l'habitation future. Ces espaces, on le comprend, sont essentiels pour l'air et la lumière.

Certaines zones seront réservées à des maisons unifamiliales, d'autres à des duplex ou appartements. D'autres zones seront mises de côté pour les terrains de jeu, les édifices publics. On n'oubliera pas la zone commerciale entre autres, et parce que la ville a besoin de revenus, on fera place à l'industrie.

Il faudra étudier avec soin cet emplacement. Y a-t-il un chemin de fer qui puisse étendre une voie de service dans cette zone? Les grandes artères y amènent-elles les matières premières, mènent-elles vers des marchés essentiels? L'énergie est-elle rendue? Quelle force? Y a-t-il une main d'œuvre appropriée? Les services publics essentiels sont-ils sur place ou possibles?

S'il est important que l'industrie ne déprécie pas les zones d'habitation par la laideur, le bruit et la fumée, il est aussi important que l'habitation soit prohibée au sein de la zone industrielle.[3]

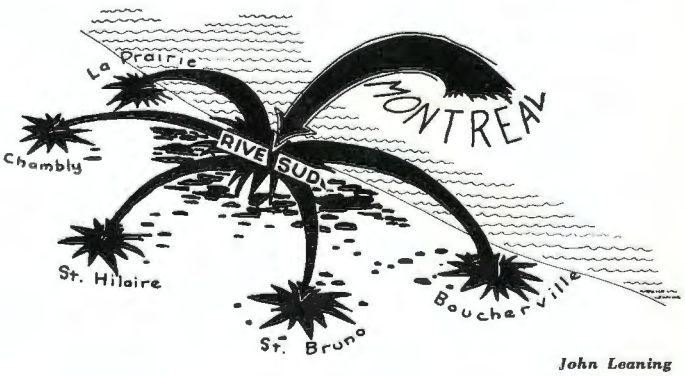
Enfin, il est important pour l'industrie de savoir à quoi s'en tenir sur la ville où elle s'établit, et le plan d'ensemble comme le plan directeur sont un atout important pour l'intéresser.

Cette description très brève révèle la possibilité d'améliorations pratiques si, avec un programme de finance adéquat, les étapes sont réalistes. Une telle entre-

[3]L'arrêt d'un tel plan ne lèse pas les droits acquis; il constitute pour ce qui n'est pas selon le plan d'ensemble, un "non-conforming use", usage non conforme. C'est en somme une espèce d'homologation.

MONTREAL, le colosse, enjambe le Saint-Laurent et déborde sur la Rive Sud; celle-ci, à son tour, se déverse sur les municipalités voisines; puis l'espace entre celles-ci se peuple. Mais tout cela sans un plan d'ensemble!

MONTREAL, the colossus, steps over the St. Lawrence and spills over the South Shore; in turn, the South Shore overflows into the neighbouring municipalities; the space between these gets settled. All this of course without planning!



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prise ne peut qu'augmenter les valeurs imposables et le crédit de la ville.

Cependant dans la pratique bien des difficultés surgissent. L'autorité peut faire les meilleurs plans et cependant voir à sa périphérie un territoire qui n'est pas sous sa juridiction se développer de telle façon que tout se gâte; et souvent il est évident qu'elle sera appelée à y fournir les services essentiels et même dans un avenir plus ou moins rapproché à annexer ce territoire.

La ville peut-elle préparer ses plans d'aqueduc et d'égouts en prévision d'une telle éventualité? Non. Que lui sert d'aménager une entrée convenable si le long de la grande route s'étalent, comme des chancres, des cimetières d'automobiles et un chapelet de bicoques sans valeur? On peut même trouver les industries les plus nuisibles installées en contiguité avec une zone résidentielle!

On connait ces problèmes et bien d'autres: ils sont typiques de notre époque et les grandes villes s'étendent sans cesse, les petites villes absorbent les territoires contigüs.[4]

[4]Le Montréal métropolitain compte 35.6% de la population de la Province établie sur 0.1% de la superficie. (*Commerce-Montréal*).

Nos pères dans leurs villages bénéficiaient du conseil de comté, chargé justement de prendre soin de ce qui n'était pas dans les limites de leur patelin. Aujourd'hui rien à faire, car il n'existe pas d'outil pour faire le travail d'aménagement au niveau régional.

Pour illustrer l'exposé qui précède, regardons la Rive Sud de Montréal qui a vu sa population s'accroître d'une façon vertigineuse, comme d'ailleurs toute périphérie des grandes villes.

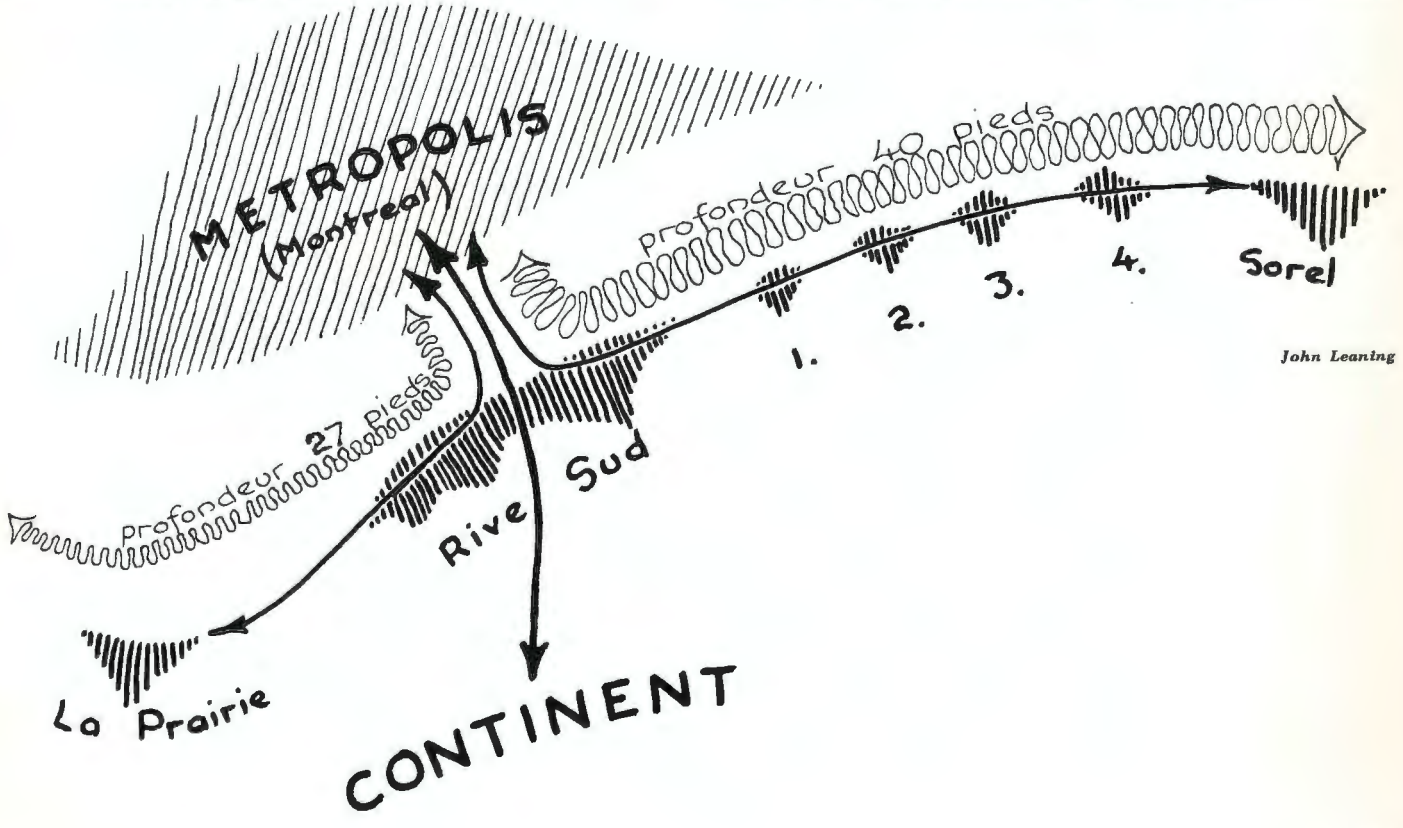
Seize municipalités composent le comté de Chambly; huit villes[5] sont contigues et dépendent du St-Laurent pour l'approvisionnement d'eau et le renvoi des égouts. Parce que la tuyauterie n'a pas été prévue et ne peut se prévoir pour une augmentation de population chez les voisins, les égouts sont à l'étroit passant de gros à petits et les systèmes d'eau n'ont pas la pression nécessaire.

Pourquoi ne pas coopérer? Depuis trois ans les maires se sont réunis dans ce but mais il n'a pas encore été possible de s'entendre sur un programme commun.

[5]Longueuil, Montréal Sud, Jacques Cartier, St-Lambert, Préville, Ville LeMoyne, Mackayville, Greenfield Park.

LA MÉTROPOLE DU CANADA—une île—est reliée au Continent par la "Rive Sud" qui sert aussi de rond-point pour les villes industrielles de la côte: La Prairie, Boucherville (1), Varennes (2), Verchères (3), Contrecoeur (4), Sorel; les bateaux des 5 Océans y rencontrent ceux des 5 Grands Lacs. Mais tout cela sans plan d'ensemble!

THE METROPOLIS OF CANADA—*an island—is connected to the Continent by the "South Shore" which is also the hub of communication for the industrial towns along the coast: La Prairie, Boucherville (1), Varennes (2), Verchères (3), Contrecoeur (4), Sorel; ships from the 5 Oceans meet there those of the 5 Great Lakes. All this of course without planning!*



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Sur ce territoire qu'on peut allonger de Sorel à Valleyfield vient se creuser le nouveau canal du St-Laurent. Déjà plus de 100 millions de capitaux industriels ont été placés en vue de l'avenir; on parle de possibilités dans l'ordre de plusieurs milliards!

Or, doit-on se demander, si on ne peut mettre de l'ordre dans ce développement, qu'est ce qui va arriver? A-t-on zoné pour l'industrie, pour l'habitation? Non.

A-t-on prévu des parcs et des plages d'autant plus nécessaires que l'automatisme industriel de l'avenir devrait apporter plus de loisirs? Non.

A-t-on étudié un réseau de routes pour desservir l'industrie quand on sait que le camion[6] remplace graduellement le chemin de fer? Non. A-t-on prévu l'eau et les égouts pour la densité future de la population? Non. A-t-on considéré les ponts dans leur ensemble comme les nœuds de concentration du système viaire essentiel pour relier non pas Montréal et la Rive Sud, mais la Métropole avec le Continent?[7] Non.

Bien plus, nos plans devraient, pour développer cette région, comprendre le creusage du fleuve jusqu'à Montréal à 40 pieds, soit le niveau à New York, et la liaison de New York à Laprairie via St-Jean par un canal. Comme les marchandises expédiées du Centre-Ouest sur les ports de l'Atlantique ne coûteront que $1.70 la tonne contre $13 par chemin de fer, il y a donc une marge suffisante pour que le péage de la Voie Maritime rembourse l'entreprise.

Un vaste territoire, le "Triangle d'Or", où déjà la spéculation immobilière prépare ses ravages, attend d'être aménagé.

A qui la faute si ce projet si prometteur semble se matérialiser dans le désordre au point que l'expérience nous fait déjà entrevoir les corrections qu'il faudra apporter plus tard? Chose curieuse, à personne!

[6]Aux E.U. 10,000,000 de camions transportent plus du ¾ du tonnage total des marchandises (*Commerce-Montréal*).

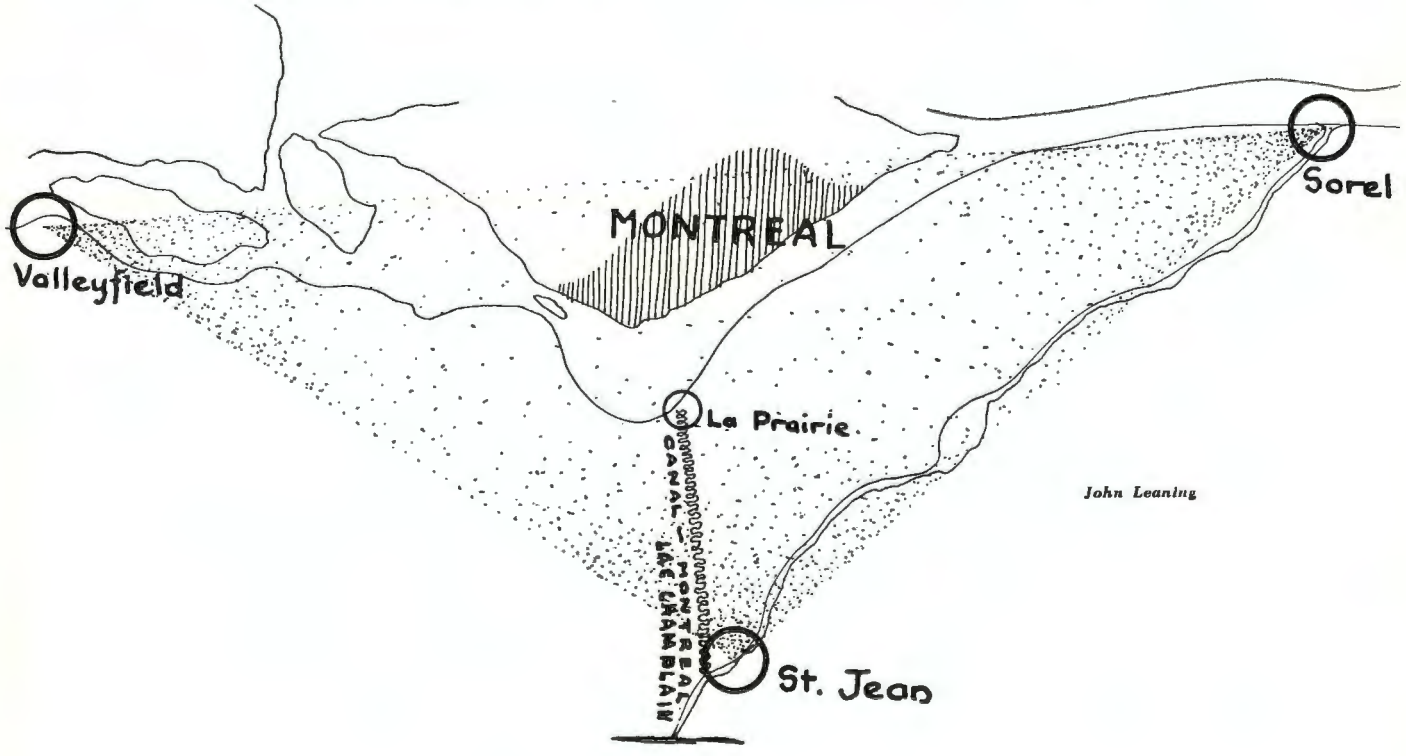
[7]Autos & Camions, Ile de Montréal, 1940: 92,381—1953: 214,140 soit une augmentation en 14 ans de 132%. Sur la Rive Sud, pour la même période, l'augmentation fut de presque 900%.

On achète au Canada depuis la guerre 25,000 autos par mois contre 6,000 avant le guerre. (*Commerce-Montréal*).

Le New Jersey Turnpike est utilisé par 102,000 voitures par jour. Construit il y a trois ans, on n'avait prévu ce nombre que pour 1981. (*Idem*).

LE TRIANGLE D'OR. L'industrialisation de la côte par la canalisation se complèterait d'un canal Montréal - New York (La Prairie-St-Jean). L'aménagement de cette riche région en vue de l'avenir s'impose.

THE GOLDEN TRIANGLE. *Industrialisation of the Shore would be completed with a Montreal-New York (La Prairie-St-Jean) canal. Planning of this potentially rich region is a necessity.*



En effet, l'Administration de la Voie Maritime du St-Laurent est chargée de faire un canal. Aidée des meilleurs ingénieurs, elle creuse le canal rapidement et le meilleur marché possible.

Les Municipalités concernées, devant l'apathie des citoyens, ne bougent pas.

Le Gouvernement Provincial respecte leur autonomie.

Le Gouvernement Fédéral se dit prêt à aider si un groupement représentatif le demande.

CONCLUSIONS

Premièrement: il est certain qu'à même le cadre légal existant, un conseil municipal *peut* faire de l'urbanisme.

Mais, devant l'apathie générale, osera-t-il se servir de lois permissives et se prononcer sur des mesures qui sont parfois vexatoires et qui peuvent être coûteuses même si elles prévoient des économies pour l'avenir?

Deuxièmement: dans le contexte des villes en grappes où des changements physiques d'une envergure qui dépasse l'emprise de la ville, les villes voisines peuvent peut-être viser à s'entendre pour un développement régional.

Mais — devant les rivalités incontrôlables, devant même l'impossibilité de réussir la chose dans le cadre de la loi, peut-on compter sur un résultat pratique?

Il s'ensuit donc que la législation actuelle, en tant que l'urbanisme est concerné, est dépassée par l'histoire et les évènements.

La planification régionale doit venir du pouvoir supérieur et un outil ancien doit être remis en honneur pour une action possible au niveau régional soit — le conseil de comté ou l'équivalent.

ENGLISH SUMMARY

In a speech given at the Congress of Industrial Commissioners on October 12th last in Ste.-Agathe, P.Q., Mr. Simard, Mayor of the Town of Preville, made the following points.

The possibilities of planning to be found in the Cities and Towns Act of the Province of Quebec, however extensive and pertinent, are only permissive. They belong to an era which is fast disappearing. Changes have occurred in the family itself — the basis of community organization. From being "patriarchal" and deeply rooted in the community, it is now "conjugal": a couple invests in a home with the idea of keeping it saleable, so as to be able to move about easily.

Moreover, the facility of buying a house with a small down payment (because Article 124 of the Act requires any candidate for office to possess $600 worth of unincumbered property) leaves most of the dwellers in new developments ineligible for public office. The mortgage is usually higher than the municipal valuation.

It follows that with permissive laws of planning and an apathetic citizenry, few municipal councils have the urge to change anything in the existing picture.

On the other hand, the pattern of urban development has changed. Instead of small towns and villages strewn about, with a "county council" to see to the intervening space, we are now confronted with the well known urban sprawl, and the space between the former small communities is fully settled. Towns are now contiguous yet unable to co-operate legally. Indeed they are reluctant to co-operate because of their pride of achievement and their fierce defence of "autonomy".

As an example, Mr. Simard uses the South Shore of Montreal where 16 municipalities lie one next to the other. While intense housing construction has taken place, it has been impossible to reach an agreement for integrated development. Moreover, this lack of regional planning threatens with chaos the possibility of a great industrial boom along the St. Lawrence waterway.

The author concludes that the county council which already has its roots in municipal legislation should be given powers of planning at the regional level.

SAINTE-MARIE DE BEAUCE: LE PLAN DIRECTEUR

par André Robitaille

SAINTE-MARIE DE BEAUCE: ÉTUDES D'URBANISME a paru dans la REVUE, volume V, No. 3 (septembre 1955).

RÉSEAU ROUTIER PROPOSÉ

Il est intéressant de noter qu'aux Etats-Unis, deux auto-routes se dirigeront vers le Québec: la première projetée dans l'état de New-York, partira d'Albany pour se rendre à Montréal; une seconde voie, existant déjà, débute à Boston, longe l'océan Atlantique dans le New-Hampshire et le Maine et doit se terminer à Augusta. L'auto-route que nous projetons dans la Beauce complètera ce dernier réseau. (*Voir Plan No. 1*).

Cette auto-route présentera de grands avantages, dont le premier sera d'ouvrir une porte facile au tourisme vers le centre du Québec. De plus, nous croyons que les Franco-Américains seront heureux d'avoir un moyen de liaison rapide avec le Québec. Le problème de l'auto-route de la Beauce doit être pensé à l'échelon provincial et ce n'est qu'ensuite qu'on l'étudiera dans ses rapports avec les villages beaucerons.

Plusieurs possibilités ont été étudiées quant à l'emplacement de l'auto-route. Nous analyserons brièvement les avantages ou désavantages de chacun des tracés.

Élargissement du tracé actuel

Ce projet a de nombreux inconvénients dont le plus important consiste à réunir la circulation nationale et la circulation régionale sur une seule artère. Les expropriations seraient très coûteuses et la rue Notre-Dame, considérée comme route nationale, ne peut être efficace. Enfin, ce projet rendrait impossible toute solution urbanistique, en concentrant davantage le village sur un axe commercial plus ou moins étranger à sa vie interne.

Comme solution temporaire, il serait bon de détourner une partie de la circulation de transit vers une nouvelle route à fonction commerciale. Cette route, longeant le chemin de fer (*voir Plan No. 4*), serait utile pendant la période de temps nécessaire à la libération des terrains situés à l'ouest de la rue Notre-Dame. De toute manière, elle servirait à la circulation interne du village, quel que soit le parti accepté pour l'emplacement de l'auto-route.

ENGLISH SUMMARY OF THE PREVIOUS CHAPTER

(An English summary of *Le Plan Directeur* appears on page 142)

ÉTUDES D'URBANISME, *the first part of the survey of Sainte-Marie de Beauce, was published in the last issue of the REVIEW. The second part,* LE PLAN DIRECTEUR *by Mr. André Robitaille, presents a Master Plan for the region. As an English introduction to the Master Plan, it may be useful to summarize the concluding chapter of the* ÉTUDES D'URBANISME.

*In that concluding chapter, Mr. Jean Cimon's aim was to review the findings of the previous chapters—*THE NATURAL SETTING, THE POPULATION AND PUBLIC SERVICES *— and to establish a basis for a Master Plan. Two problems, Mr. Cimon believes, are closely linked together: relief for traffic congestion and a harmonious distribution of urban functions in the village. By monopolizing all activities, Notre-Dame Street is paralyzing the life of the village. Immediate planning of the hillside's new housing development is stated to be a prerequisite for long-term replanning of the central part of Sainte-Marie. Mr. Cimon concludes his analysis by reviewing the four fundamental factors which will determine the replanning of the village. These factors are the river, the railroad, the hillside and the highway.*

Mr. Cimon's analysis, which is a link between the Survey and the Master Plan itself, suggests what the basic objectives of the Plan should be. The Master Plan is intended to be a response, in terms of physical development, to the sociological indications revealed by the Survey.

The five authors — Messrs. Hamelin, Martin, René Robitaille, Cimon, and André Robitaille — hope that their collective endeavour will convince municipal authorities of the necessity of a thorough Survey before any Master and Zoning Plans are drafted. They also hope that they have not failed in their efforts to demonstrate that Town Planning means teamwork on the projection of a practical program of development — and that a town planning survey is not merely a piece of academic literature to be added to an already-worked-out Master Plan.

Solutions intermédiaires

Une autre solution s'est présentée que nous avons rejetée immédiatement parce que le tracé séparait le village en deux sections. Il s'agissait de faire passer l'auto-route d'un côté ou de l'autre de la voie ferrée, ou bien quelque part sur le rebord du coteau.

Auto-route au sommet du coteau
(Projet No. 2, voir Plans No. 1 et 4)

L'auto-route au sommet du coteau nous a semblé longtemps la meilleure solution, car son rattachement au village était avantageux. Cependant, cette solution gênerait l'expansion du village et couperait la source d'eau de l'agglomération. Mais l'argument principal à considérer est son coût. Cette route, dans toute la Beauce, passerait bien à l'arrière des villages. Les terrains sont escarpés, plusieurs ponts devraient être construits; de plus, les courbes ne pourraient pas être éliminées totalement.

Nous pensions reporter cette route au delà du tracé indiqué au Plan No. 4, à l'emplacement du rang Saint-Gabriel, mais l'attrait touristique que possédait le tracé du Projet No. 2 serait perdu.

Auto-route sur la rive gauche
(Projet No. 1, voir Plans No. 1 et 4)

Construire l'auto-route sur la rive gauche de la rivière Chaudière semble être la solution idéale, car la route située légèrement au delà du rang du Bord de l'eau ne pourrait nuire au développement de Sainte-Marie ni à celui d'aucun autre village de la Chaudière.

En songeant à l'apport touristique et commercial que peut fournir cet emplacement, nous constatons immédiatement que le village sera visible de partout sur l'auto-route. Le village lui-même sera l'annonce qui fera s'arrêter l'automobiliste. Cette route ne pouvant pas être construite dans le lit majeur de la rivière, il faudra la reporter sur le flanc des coteaux et il semble que le coût de construction y soit moins élevé que pour le projet No. 2. De nouveaux ponts sur la Chaudière seront nécessaires, mais il faut penser que plusieurs de ceux qui existent sont désuets et placés à des endroits maintenant inadéquats pour le bon fonctionnement des villages.

Nous n'avons pas évidemment à nous prononcer d'une manière définitive sur l'emplacement de l'auto-route. Les ingénieurs spécialisés du gouvernement provincial ont seuls la responsabilité de prendre la décision finale. Nous espérons toutefois que ce projet se réalise au plus tôt.

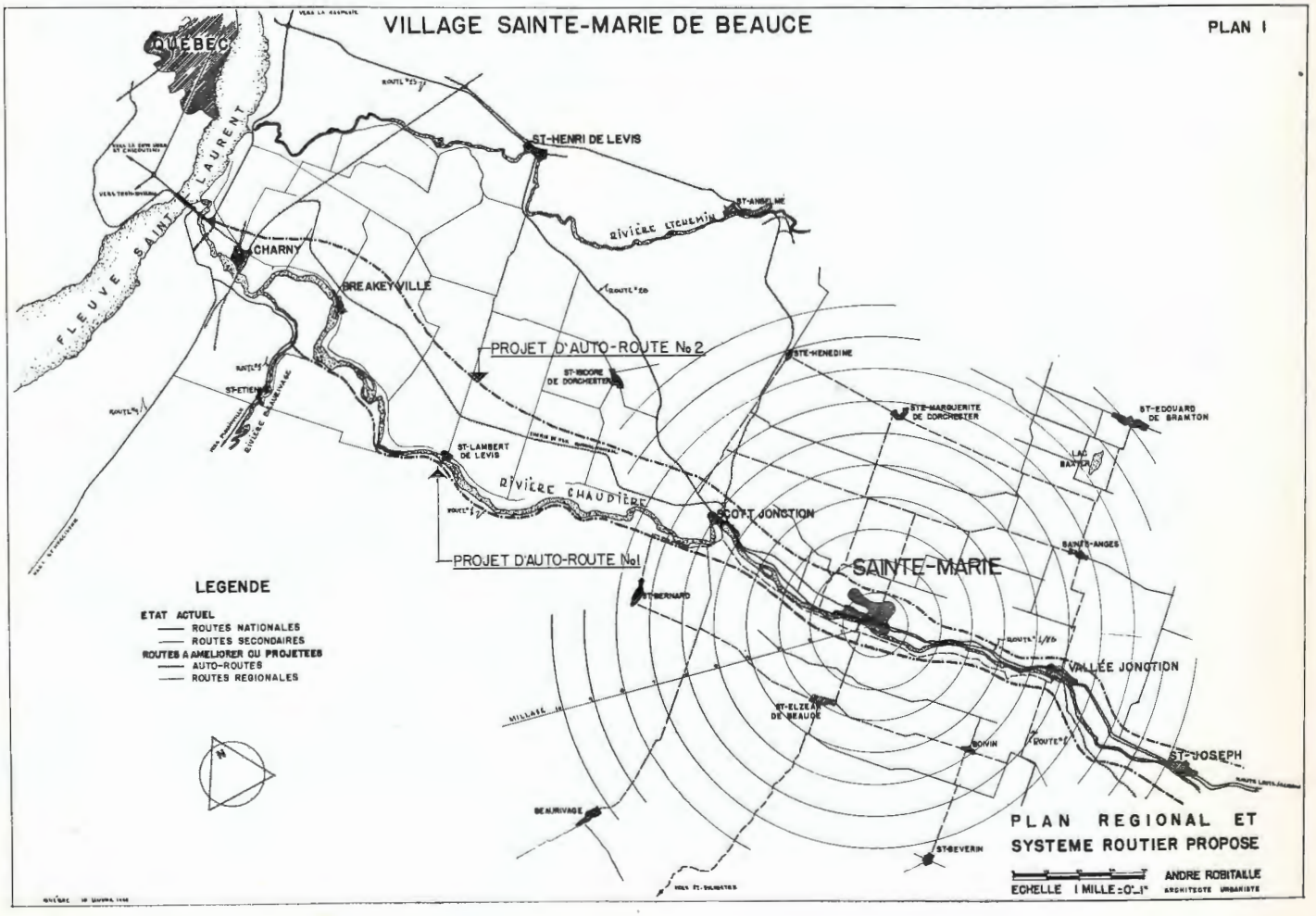


Photo: Service Provincial d'Urbanisme

RUE NOTRE-DAME

La perspective de l'église encadrée de verdure donne un charme particulier au centre du village. A noter l'absence stupéfiante de trottoir du côté droit de cette artère qui est aussi une route nationale de circulation très dense. Les autoroutes doivent-elles traverser les villages?

The church, framed in the trees, lends a special charm to the centre of the village. Note the astonishing lack of footpath on the right of this street which is a national artery with very heavy traffic. Should auto routes go through the villages?

La route régionale

La route régionale desservant toute la Beauce, conservera le tracé actuel; cependant, plusieurs sections de la route devront être améliorées ou refaites.

A Sainte-Marie, cette route sera sectionnée en deux artères: la première est l'actuelle rue Notre-Dame; la seconde artère ayant son point de départ derrière la Chapelle Sainte-Anne, longera le côté Ouest du chemin de fer jusqu'à l'usine Baronnet, traversera la rue Notre-Dame et passera derrière le cimetière, au Sud-Ouest du Village.

Ajoutons qu'il serait avantageux de terminer au plus tôt la route déjà en construction qui, du Pont de Québec, se dirige immédiatement vers Scott en longeant la rivière Chaudière. Cette route remplacera le détour actuel par Saint-Henri qui allonge considérablement le trajet des Beaucerons vers le pont de Québec.

Les routes de l'hinterland

La petite région de Sainte-Marie, si elle désire retirer les avantages que lui apporteront une unité régionale organisée, (redevenir le marché d'autrefois) doit être pourvue d'un réseau rationel de voirie. Mais ceci ne peut se réaliser qu'avec la collaboration des villages voisins.

PLAN DIRECTEUR DU VILLAGE

L'analyse des mouvements de population qu'Yves Martin nous fournit au début de cette étude ne nous permet pas, comme il le souligne lui-même, de donner des prévisions exactes sur la population future de Sainte-Marie de Beauce. Mais si le village maintient l'accroissement des dernières années, compte tenu des avantages qu'apportera l'exécution du Plan Directeur, il nous est permis de prévoir que vers l'an 2000, l'agglomération comptera une population d'environ 8,000 habitants. Il est possible que ce chiffre ne soit pas atteint; une crise économique ralentirait sérieusement le progrès du village, puisque le facteur population est étroitement lié au fait industriel.

D'autres causes pourraient arrêter l'épanouissement de l'agglomération: le maintien du statu quo sans l'application du présent Plan Directeur, l'agrandissement subit d'un village voisin, une grande inondation, un incendie considérable (toujours possible dans un village dense et de construction légère comme Sainte-Marie); ces facteurs sont autant de causes qui nuiraient à l'expansion naturelle de Sainte-Marie. Cependant, il est à espérer que le village se développe normalement: l'attention apportée par les autorités municipales et par l'élite de la communauté à l'étude des problèmes urbains, ouvrira sans doute une ère de prospérité. Mais on devra retenir à Sainte-Marie les jeunes de la paroisse qui auraient la tentation d'émigrer. Yves Martin a montré qu'entre 1941 et 1951, l'émigration de Sainte-Marie a été considérable. Il faut absolument garder au village sa population et ce point est d'autant plus important que, depuis 1951, la natalité est à la hausse.

Il sera nécessaire de loger dans le village les ouvriers qui viennent y travailler, mais qui ont actuellement leur domicile à l'extérieur. Dans nos prévisions, il faut tenir compte du fait que de nouvelles industries pourront venir s'établir à Sainte-Marie. On construira de nouveaux quartiers d'habitation et des centres commerciaux; les services municipaux et l'équipement social seront complétés.

Notre plan prévoit donc une population d'environ 8,000 habitants en l'an 2000. Nous décrirons plus loin les étapes dans l'extension du village. Mais le plan est assez souple pour s'adapter à une croissance régulière ou spasmodique de l'agglomération.

Les emplacements

L'étude du Plan d'utilisation du sol dans Sainte-Marie nous a conduit à accentuer, au moyen d'un Plan de zonage, le caractère de certaines parties de l'agglomération actuelle.

Le thème dominant du Plan Directeur est que le centre nerveux et administratif du village demeurera à l'endroit où il se trouve actuellement: le centre autour duquel rayonnera le futur Sainte-Marie. La rue Notre-Dame, au centre du village, gardera le caractère commercial que nous lui connaissons et elle continuera de jouer le

rôle—partagé avec la nouvelle voie longeant le chemin de fer—de route régionale importante. Les autres parties du Village actuel, à l'exception des quartiers réservés exclusivement à l'habitation ou à l'industrie, deviendront des zones de construction mixte. On autorisera l'établissement de deux zones touristiques aux deux extrémités du village actuel. L'industrie, installée au sud de la Route Carter, sera raccordée aux quartiers d'habitation par trois rues. Les nouveaux quartiers d'habitation occuperont les replats du coteau. Un parc public sera aménagé en bordure du Ruisseau Carter et le centre de villégiature de la Rivière Chassé verra son développement complété. Les unités de voisinage seront isolées par des massifs de verdure qui les protègeront contre la présence d'industries dans le voisinage.

Les circulations

Si le tracé des quartiers futurs est organique et décentralisateur, le graphique des circulations présente un quadrillage traditionnel. Les bases de ce système routier à peu près rectangulaire sont la Rue Notre-Dame et la Route Carter. Le Plan No. 4 indique la fonction des nouvelles rues suggérées dans le Plan Directeur. La trame des circulations a été conçue de façon à ce que la vie de l'agglomération ne soit pas influencée par l'emplacement de la future auto-route. Un seul accès sera prévu dans tous les cas et cette jonction devra assurer une sécurité parfaite aux piétons et aux véhicules.

Réaménagement du village actuel
(Comparer les Plans 3 et 4)

Il consistera d'abord à lui donner les voies de circulation dont il a un besoin vital. Il s'agit ensuite d'aérer certains îlots où les constructions sont pressées les unes sur les autres et de mauvaise qualité; le règlement de zonage permettra d'atteindre ce but à longue échéance. De nouveau, la verdure pénétrera à l'intérieur du vieux village.

On construira une nouvelle rue collectrice parallèle à la Rue Notre-Dame et longeant le côté Ouest du chemin de fer: cette rue part de la Rue Notre-Dame au nord du village—près de la Chapelle Sainte-Anne—longe le chemin de fer dans le centre du village, retraverse la Rue Notre-Dame près de l'usine Baronnet et longe la Chaudière en passant derrière le cimetière situé à l'extrémité Sud du village actuel. Cette nouvelle rue collec-

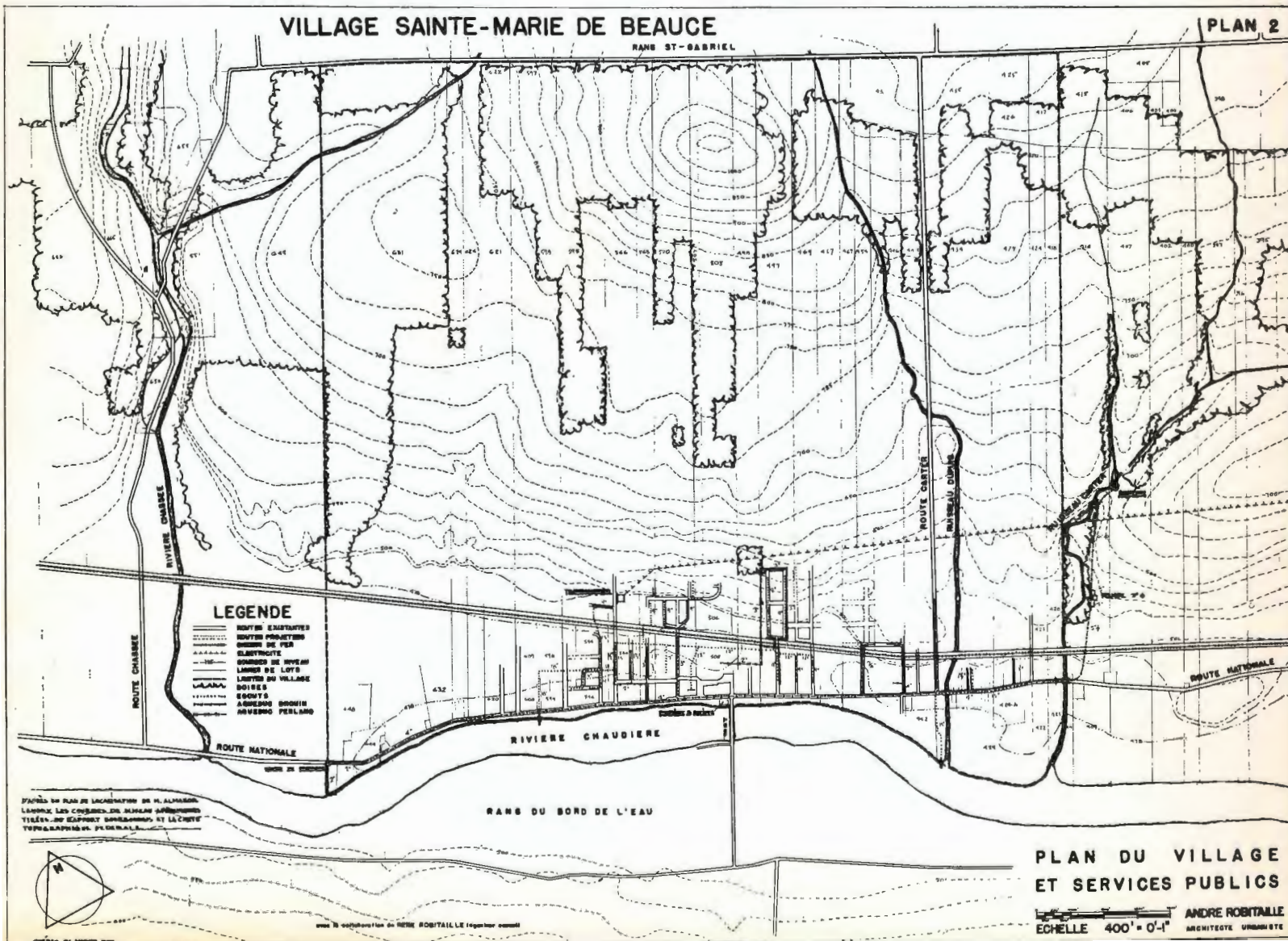


Photo: Service Provincial d'Urbanisme

LE VILLAGE, VU DU COTEAU

La majeure partie du village de Sainte-Marie est située dans la basse plaine de la Chaudière. Au premier plan, un quartier neuf installé sur le coteau oriental. En face, le versant occidental déboisé de la vallée.

Most of the village of Sainte-Marie is situated on the low plain of the Chaudière valley. In the first plan, a new quarter was established on the eastern hillside. In the foreground is the cleared area on the western slope.

trice a pour but de suppléer à l'insuffisance de la Rue Notre-Dame et à détourner du centre de Sainte-Marie la circulation lourde, locale et de transit.[1] La construction de cette rue est la première étape du réaménagement de Sainte-Marie de la Vallée.

Une deuxième rue collectrice reliera la Place de l'Eglise au replat du coteau. Inutile d'insister sur l'importance de cette voie: ce sera la première étape dans l'aménagement ordonné de Sainte-Marie des Hauteurs.

Il faudra terminer la rue Saint-Antoine, entre les rues Saint-Patrice et Saint-Jean, prolonger la rue de l'Hospice au Nord et au Sud.

Quels sont les inconvénients de l'absence de zonage que nous déplorons actuellement à Sainte-Marie?

(a) baisse de valeur des immeubles par suite de leur voisinage avec des constructions indésirables;

(b) baisse de valeur des immeubles par suite de fréquents changements de destination pour un même immeuble;

(c) fatigue mentale et nerveuse causée par le bruit, le désordre des fonctions urbaines, la monotonie et la laideur du milieu ambiant;

(d) la rue-à-tout-faire est une cause permanente d'accidents, elle entrave la circulation et l'efficacité des services publics;

(e) l'absence de plan directeur occasionne le gaspillage du budget municipal dispersé sur des travaux publics au jour le jour et toujours en retard sur les besoins;

(f) mauvaise utilisation du sol et spéculation foncière abusive.

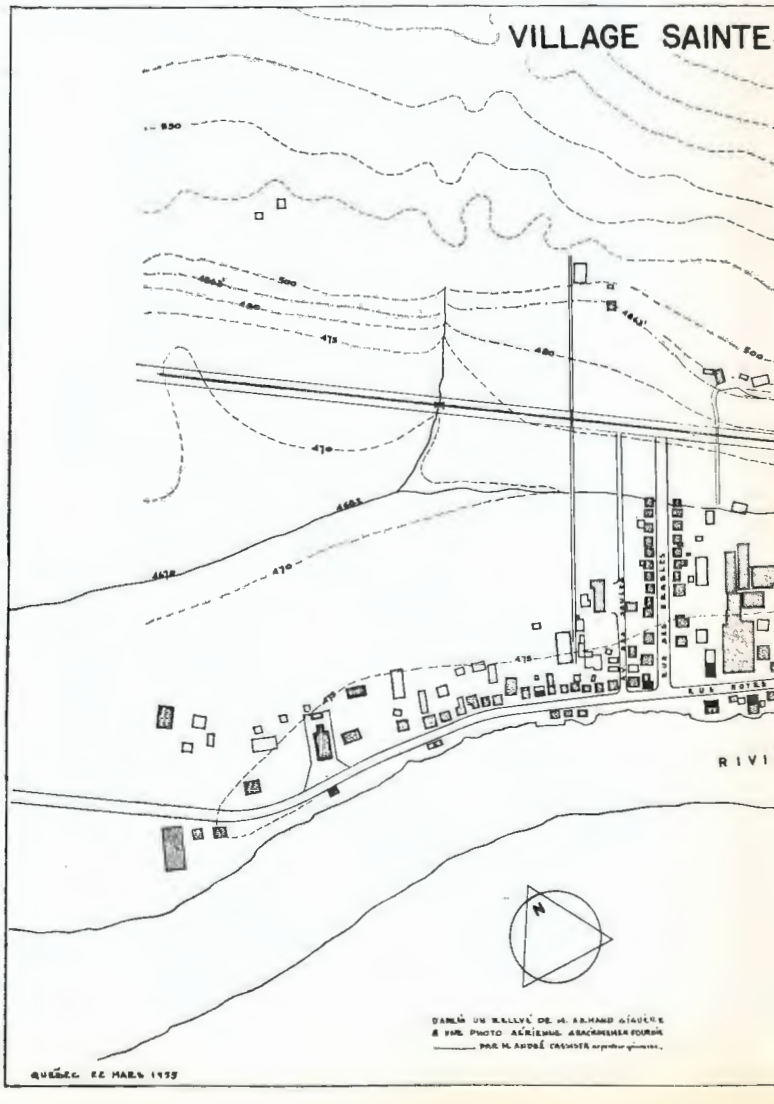
[1]Cette solution a d'abord été suggérée lors d'une étude préliminaire du Service Provincial d'Urbanisme.

Il est possible de zoner des terrains vierges, mais le problème devient ardu quand il s'agit de zoner une agglomération déjà bâtie, où toutes les erreurs ont pu être faites. Dans l'ensemble, nous tentons de conserver le caractère existant des quartiers bâtis; certaines parties, à notre regret, seront classées comme zones mixtes (i.e. habitation et industrie ou commerce). En outre, pour des raisons d'organisation du territoire, il faudra changer la fonction de certains quartiers.

Pénétration de la verdure dans l'agglomération

Jean Cimon a décrit comment les conditions naturelles avaient été répudiées à Sainte-Marie: le village tourne le dos à la rivière, quelques arbres subsistent par hasard. Si on excepte les environs de la Place de l'Eglise, aucun espace libre important n'existe à l'intérieur du village. Nous devons féliciter les responsables des deux terrains de jeux et nous souhaitons que leur travail se poursuivre et que s'ouvrent de nouveaux terrains aménagés en vue de la santé physique et morale des enfants et des adultes.

Nous proposons que l'élargissement de la Rue Notre-Dame se fasse en vue de l'aménagement d'un parc continuel en bordure de la Chaudière. Ce sera là un apport



considérable pour l'hygiène et l'esthétique du village, un attrait pour le tourisme. Mais le travail le plus délicat sera l'introduction de la verdure à l'intérieur du domaine bâti. La ville verte et ensoleillée n'est pas un rêve d'urbaniste en chambre: elle existe en Suède[2] et elle est une nécessité impérieuse. Nous y arriverons par une règlementation souple, mais surtout par la collaboration permanente des intéressés.

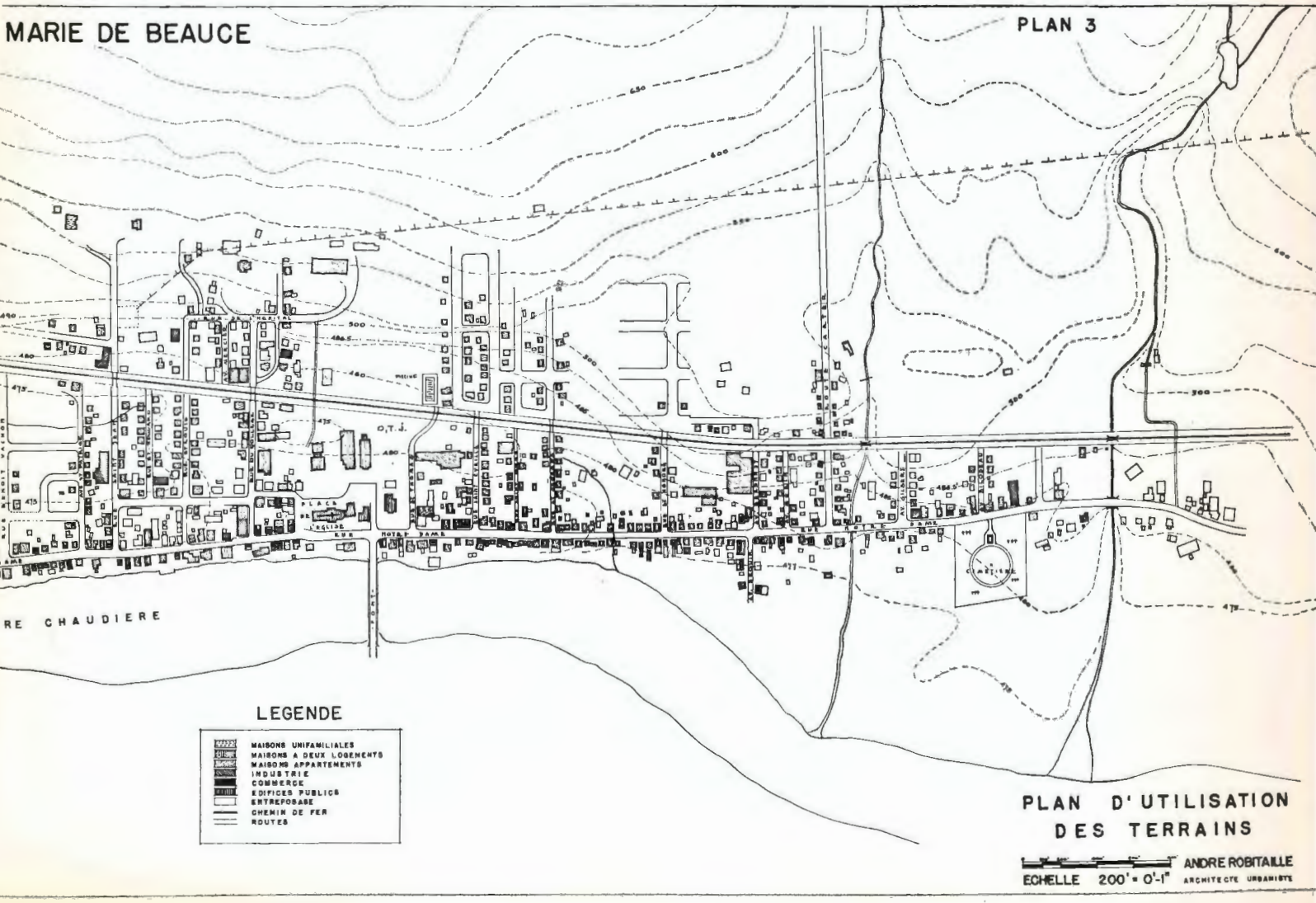
Le premier développement à étudier et dont il faut poursuivre la réalisation est le quartier neuf situé à l'est de la voie ferrée. Nous aurions aimé créer à cet endroit un ensemble fonctionnel dont le tracé serait lié aux particularités du sol; mais nous devons tenir compte de ce qui existe déjà. Malheureusement, les rues ont été orientees dans le sens contraire au bon sens. N'oublions pas que la rue résidentielle doit être tracée de manière à permettre un ensoleillement satisfaisant des résidences placées en bordure aussi bien que l'utilisation des perspectives intéressantes. La rue résidentielle doit être intime, courte de préférence, de manière à ce qu'on ne soit pas tenté de construire des alignements monotones de maisons, et aussi pour ralentir la circulation qui y doit passer le moins possible. Il y faut des arbres, de la tranquilité, de la sécurité.

Nous voulons créer là une unité de voisinage (neighbourhood unit) d'environ 1,000 habitants. Evidemment, il y aura toujours la proximité de la voie ferrée et des usines, mais si ce développement n'est qu'une étape vers la réalisation de véritables unités de voisinage, nous pensons qu'il vaut la peine d'y travailler.

Après avoir fait un relevé topographique complet des lieux, il faudra subdiviser le terrain de manière à avoir une zone d'habitation uni-familiale, des zones de blocs-appartements et une zone d'habitations en bandes continues (row-houses); un centre commercial sera prévu, de même qu'un centre civique (religion, culture et loisirs).

En même temps que ce quartier sera préparé, il sera nécessaire de construire le boulevard qui longe la ligne de transmission, d'élargir la Route Carter, en réservant des zones de verdure sur chacun de ses abords.

[2]Voir *"Suède, pays de l'urbanisme"*, par Jean Cimon, Les Presses Universitaires Laval, Québec, 1955.



LES QUARTIERS DE L'AVENIR

Il faut créer une ville organique, c'est-à-dire une agglomération dans laquelle la vie sociale soit possible, sans trop de promiscuité, mais avec tout de même une densité satisfaisante, car "si le manque d'espace tue les habitants par absence de régénération, trop d'espace tue la ville en rendant les frottements sociaux impossibles. L'harmonie entre les possibilités d'isolement et d'air pur détermine l'équilibre viable. Jusqu'ici, les espaces plantés ne constituaient que quelques creux au milieu d'un vaste et unique bloc, désormais, la ville sera composée de blocs séparés, flottant dans de la verdure".[3]

Mais s'il y a un maximum de densité idéale dans une ville, il faut pour se conformer à des lois organiques, grouper, limiter, en unités individuelles, des parties de ville. Quelle sera l'échelle, les limites géographiques et psycho-sociales de ces unités de voisinage?

Premièrement, le pas de l'enfant[4], son parcours de la résidence familiale à l'école, limite la dimension de l'unité de voisinage. Mais c'est aussi la structure sociale naturelle qui détermine la grandeur du noyau. Il existe un ordre de grandeur sociale où les contacts sont plus faciles, où l'efficacité dans le travail est plus complète et plus facile. Un autre facteur, l'économie, doit être considéré: comment une communauté peut-elle financer la construction de routes, d'une église, d'une école, d'un centre social?

Platon estimait qu'un groupe social dont tous les membres peuvent se connaître mutuellement ne peut dépasser 5,000 âmes; des estimés du dix-neuvième siècle donnaient de 2,000 à 2,500 habitants, mais des expériences plus récentes réduisent ce chiffre à 1,000. Nous croyons qu'une unité de voisinage contenant de 1,200 à 1,500 habitants est possible dans le Québec et à Sainte-Marie de Beauce, en particulier. L'école contiendra 8 ou 9 classes et devra recevoir 400 élèves. L'église aura une capacité minimum de 300 sièges.

Chaque unité de voisinage devra avoir une superficie de 2,500,000 pieds carrés, à laquelle on ajoutera les surfaces nécessaires à l'équipement social. Il faudra distribuer 300 parcelles, donner 7,200 pieds carrés pour 4.3 personnes, soit 1,680 pieds carrés par habitant. Il sera avantageux de subdiviser l'unité de voisinage en cinq cellules de 60 familles chacune, chaque cellule possédant un parc, une maternelle, un garage commun, etc. Le centre de l'unité de voisinage est constitué par un groupement commercial, une église, une école primaire, un centre civique. Le tracé des rues sera soigné, fonctionnel et peu coûteux. La verdure aura la place d'honneur.[5]

[3]Gaston Bardet: *Problèmes d'urbanisme,* Dunod éditeur, Paris, 1941, p. 253.

[4]Le Corbusier: *La Maison des Hommes,* Plon, Paris, 1942.

[5]Le Plan No. 4 ne donne qu'une esquisse préliminaire de ces unités de voisinage; une étude plus poussée devra compléter cette esquisse avant toute réalisation.

Venant de l'extérieur, on devra pouvoir atteindre les zones industrielles rapidement et facilement, donc le réseau des voies de pénétration est de première importance. D'autre part, la situation de ces zones industrielles par rapport au centre commercial et aux zones d'habitation est importante: il ne doit pas y avoir de gaspillage inutile de temps et d'énergie pour se rendre au lieu du travail. Le chemin de fer pénétrera facilement dans ce cadre industriel: le terrain prévu pour les installations ferroviaires possède une pente très légère, la plus faible qu'on puisse trouver à la périphérie Sud de l'agglomération; le sol y est sec et les services d'eau et d'égoût peuvent y être installés facilement. Les vents dominants en provenance du Nord ont motivé l'emplacement choisi pour ces zones industrielles futures. (*Voir le Plan No. 4*).

Le problème majeur de l'aménagement des abords d'une agglomération consiste à préparer et à réserver les terrains requis pour son extension et pour son aération. L'utilisation future des terrains périphériques au Sainte-Marie actuel doit être envisagée sous ces deux aspects: les terrains qui recevront le futur domaine bâti et les terrains qui seront réservés comme espaces verts (parcs, agriculture, cimetière). Les rives de la Rivière Chassé et du Ruisseau Carter devraient être reboisées immédiatement.

L'équipement civique

"Habiter, travailler, cultiver le corps et l'esprit, ainsi s'écoulent les heures . . ." (Le Corbusier). La récupération intellectuelle et physique des énergies dépensées au travail est une condition formelle de la régénération de nos sociétés. Mais comment donner à tous les travailleurs la détente physique et mentale qui leur est indispensable! D'abord ne pas habiter près du lieu de travail. Ensuite, replacer le logis et le lieu de loisir dans des cadres naturels. Créons des zones vertes ensoleillées, où le terrain est sec, à proximité de l'eau et des champs; où le repos est facile de même que la pratique des sports; où simplement le travail agraire peut être fait par chacun.

Il faut protéger l'enfant contre les dangers de la route, donc placer l'école et le centre de loisirs au bon endroit. Organiser ces loisirs, et ceci est une technique précise.

Dans les nouveaux quartiers de Sainte-Marie, chaque unité de voisinage aura ses jeux d'extérieur, un centre récréatif complet pouvant satisfaire une population de 1,200 habitants. Il ne s'agit pas de construire une salle comme on en fait actuellement partout. . . . Il faut bâtir un réel centre communautaire qui possédera l'ambiance architecturale nécessaire à la naissance d'une âme commune.

Bien plus, chacune des cellules-villages de soixante familles, dans l'unité de voisinage, possédera une garderie d'enfants qui, non seulement libérera la mère de certaines obligations, mais permettra aux enfants, dès leur jeune âge, de recevoir un début d'instruction et l'initiation

progressivement facilitée à la vie collective. Chaque cellule-village aura son petit parc, une buanderie, un atelier de réparation, un garage commun et même un petit club. Le tout pourra être organisé sur une base coopérative.

A l'échelle du grand Sainte-Marie, l'équipement civique devra être complété par un aréna que nous voulons placer au sud du village pour des raisons de circulation, de stationnement, et à cause d'exigences techniques. On devra aménager une plage municipale dès que l'eau de la rivière Chaudière sera assainie. Après la libération des berges de la rivière, la rue Notre-Dame sera un parc continu, une promenade agréable à l'usage des habitants du centre de la ville.

Il deviendra nécessaire d'ici peu de temps d'étendre les services de l'Hospice actuel, pour en faire un hôpital à fonction municipale. C'est d'ailleurs un voeu énoncé depuis longtemps par certaines personnalités de Sainte-Marie.

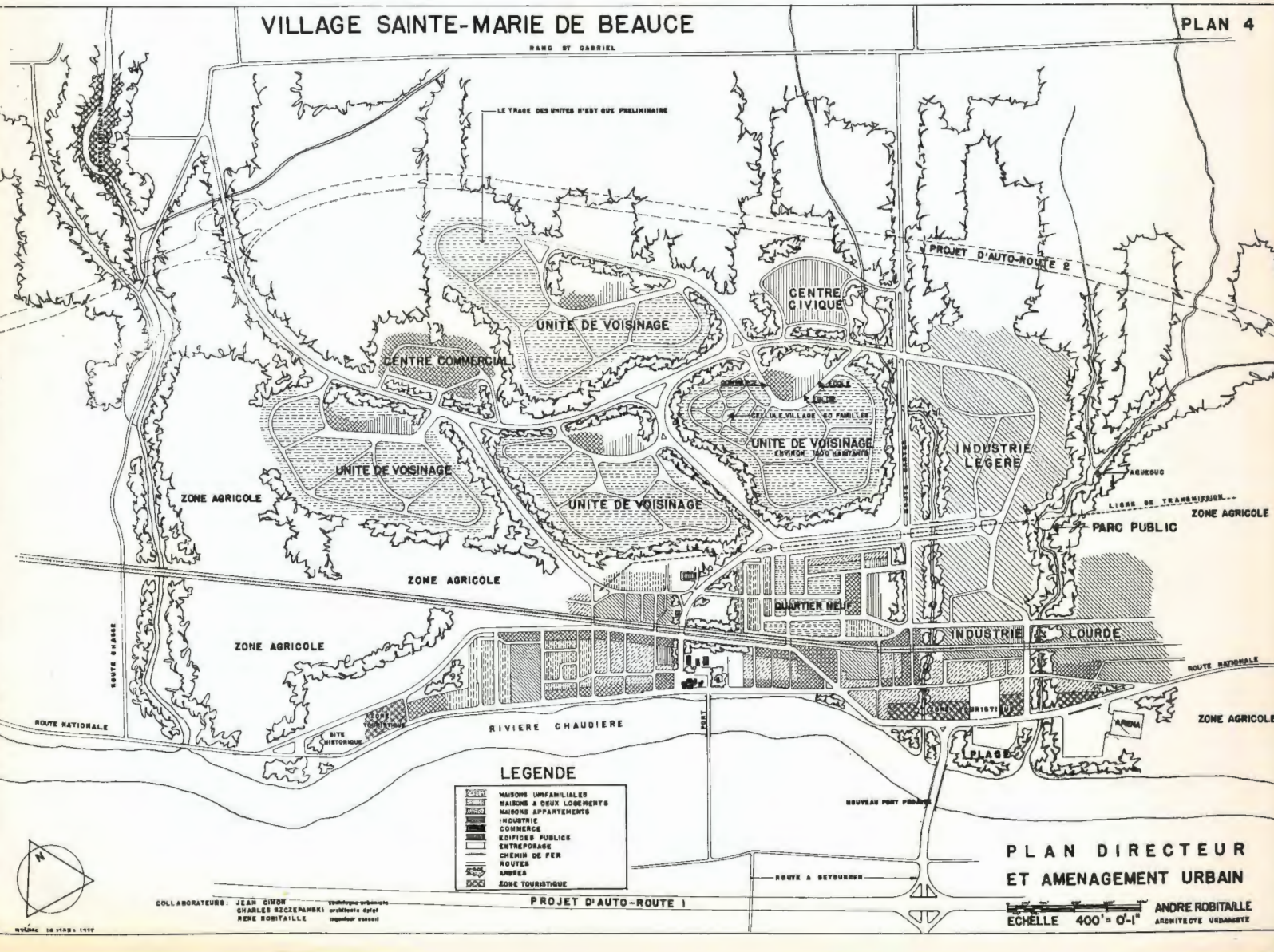
Nous ne croyons pas que la construction d'un hôtel de ville soit d'une nécessité immédiate. Cependant, nous prévoyons son emplacement dans le nouveau centre municipal situé à l'est du village, au sommet du coteau.

Une église avec presbytère sera prévue dans chaque unité de voisinage de mille cinq cents habitants. Un jour, il faudra songer à placer quelque part un nouveau cimetière; on le situera à la périphérie du futur Sainte-Marie.

Une nouvelle gare ferroviaire devra être construite au sud du village, près de la zone industrielle; mais la gare routière devra être placée dans l'axe central du village.

Il faudra aussi garder dans l'axe central du village (le nouveau boulevard qui commence à la Place de l'Église) les services de police et de feu. Cependant, ces services pourront aussi être situés aux environs de la route Carter.

René Robitaille a étudié suffisamment le problème de l'aqueduc à Sainte-Marie pour que la question soit compréhensible dans son ensemble (*Voir Plan 2*). Des spécialistes pourront maintenant être engagés afin de prévoir les services de drainage et d'aqueduc nécessaires au développement de l'agglomération. Nous insistons cependant sur le fait que la rivière Chaudière devra être assainie. Nous suggérons qu'un conseil régional soit créé afin d'étudier cette question; on pourrait y examiner des



problèmes régionaux comme celui du reboisement, des inondations, du réseau routier.

Esthétique et fonctionalisme

Faire de l'urbanisme, ce n'est pas uniquement entreprendre une enquête sociale ou économique. Faire de l'urbanisme ne consiste pas seulement à subdiviser des terrains en lots ou à dessiner des plans paysagistes. Faire de l'urbanisme ne veut pas dire simplement tracer des routes, créer des axes, équilibrer des volumes architecturaux ou rêver à des formes dans l'espace. Ce n'est pas chacune de ces disciplines prise isolément, mais c'est la synthèse de tout cela qui exprime l'âme d'une population.

C'est parce que l'âme des villes évolue continuellement que le visage d'une ville se transforme. Camillo Sitte écrivait en 1889: "Le temps produit des changements inexorables dans la vie des communautés; et ces changements altèrent la signification originale des formes architecturales". La conception de vie des Egyptiens, des Grecs, des Romains, du Moyen Age, de la Renaissance ont créé des types de villes bien particuliers; mais l'homme évolue aussi de nos jours et le visage des villes de demain ne ressemblera pas à celui d'aujourd'hui. La ville que nous entrevoyons ressortira d'une esthétique nouvelle parce que nos conceptions sociales changeront la vie des hommes, parce que des techniques contemporaines permettront de maîtriser le climat, de réaliser des formes nouvelles. Le décor urbain sera renouvelé.

L'édifice sera fonctionnel de plan, et son apparence extérieure dira sa structure et sa raison d'être. L'habitation cessera d'être conçue par des amateurs mais gagnera économiquement, fonctionnellement et esthétiquement à être étudiée par des spécialistes. La maison unifamiliale devra adopter en général d'autres formes que celles de la maison isolée que nous lui connaissons actuellement. Et nous insistons sur ce point parce qu'il est vital: les maisons unifamiliales devront être groupées, juxtaposées si l'on veut, mais de toute manière il faudra employer une formule plus économique.

Le zonage, les règlements de construction et la formation du goût populaire sont les outils qui modèlent pour une large part le visage des villes.

THE MASTER PLAN — ENGLISH SUMMARY

Mr. André Robitaille stresses the necessity for an adequate highway in the Beauce Valley. He describes two highway projects (see Plan No. 1) that would keep clear of the numerous villages built on the banks of the Chaudière River. He also suggests that the speedway which he proposes should be connected with the new superhighway between Boston, Massachusetts, and Augusta, Maine.

Stating that Yves Martin's analysis does not allow for an exact forecast of Sainte Marie's future population, Mr. Robitaille foresees a population of about 8,000 in the year 2000, providing that the Master Plan is fulfilled and that no major unforeseen events occur.

The Plan provides that the Village's administrative and social core will remain where it is now. To improve local traffic conditions in the village, two new main streets are proposed: a by-pass parallel to Notre-Dame Street and an 80-foot-wide street to connect the future hillsides neighbourhood units to the core (i.e. the Place de l'Église) of the existing village (see Plan No. 4).

One major item in the replanning scheme is that Notre-Dame Street will eventually become a parkway facing the Chaudière River, with houses and public buildings on the East side of the street only.

The Master Plan (see Plan No. 4) for the future residential district on the hillside consists of four neighbourhood units, each unit having a population of about 1,500 people and a 2,500,000 square foot area. There would be three hundred lots with 7,200 square feet for every 4.3 persons, that is 1,680 square feet per inhabitant. The neighbourhood unit itself would be divided into five cells, each cell containing 60 families with a park, a nursery, a collective garage and other common facilities. The centre of each neighbourhood unit would have a small church (300 seats), a primary school and a small shopping centre.

Coming from the outside, easy access by rail and truck to industrial zones is of primary importance and special consideration has been given to these requirements in the location (see Plan No. 4) of Sainte-Marie's future industrial areas.

The major problem in planning the immediate environment of a town is to prepare and preserve the necessary grounds for its expansion and its aeration. These two aspects have been dealt with in the choice and location of the future built-up areas and in the provision for permanent green acres (agriculture, parks and playgrounds, cemetery, etc.). The banks of the Chassé and Carter Brooks will be reforested.

The building of a Trans-Canada highway raises vital problems in community planning. For constitutional reasons, it is our provincial governments which must bear the responsibility for protecting the huge investment of both national and provincial funds in this throughway. It is timely therefore to have an article written by a leading provincial planning official. This article is based on an address given by Mr. Allen at the Atlantic Regional Conference of the CPAC in Charlottetown on October 3rd, 1955. Mr. Allen is Director of the Planning Branch of the Department of Municipal Affairs in the Province of New Brunswick.

DEVELOPMENT ALONG THE TRANS-CANADA HIGHWAY

by Edwin G. Allen

THERE is no doubt whatever that if we are to control development along the Trans-Canada highway, action should be taken in the immediate future. I feel that if we do not implement some system of control for development along this highway, we shall soon find ourselves in the same position as we are in now in regard to other highways and diversions which have been built in the last few years.

To assure that whatever money is invested in any main highway, such as Trans-Canada, will give its proper returns in transportation values, several objectives must be attained:

(1) removal of the causes of highway accidents;
(2) removal of the obstacles to a free flow of traffic, and prevention of congestion;
(3) preservation of the natural beauty of the countryside.

All these three objectives are interrelated. Improvements to serve one of them may serve all three.

You know, as I know, that one great obstacle in going from place to place in a reasonable time is the present necessity of travelling through populated areas. The built-up areas lying along either side of many of our highways is detrimental to the movement of traffic. Measures to remedy this situation by widening, straightening curves, and even building new roads through built-up areas have been costly and in many instances only temporary.

This has been particularly true as far as the Province of New Brunswick is concerned. Within the last few years our Province has spent large sums of money in building roads through congested areas in order that the flow of traffic would be accelerated and that life and property would be protected. However, within a year or two after such a highway is built, we find ribbon development throughout the entire length of the new highway. Naturally, in order to cut down the number of accidents that might occur, our Province has been forced to make many of these new stretches of road thirty mile speed zones. Thus, we have actually been defeated in our original purpose for constructing these roads. I presume that the same has happened in the other provinces.

This problem has become so serious in New Brunswick that the government was forced to amend the Highway Act at the last session of the legislature in order that the Lieutenant-Governor in Council upon the recommendation of the Minister of Public Works might designate any portion of a highway not within a city, town or incorporated village, as a controlled access highway.

Moreover, the Act now states that no person shall, except under a permit from the Minister, sell or offer for sale any vegetable, fruit, meat, fish or other produce or any goods, wares or merchandise upon or within one hundred and fifty feet of the limit of a controlled access highway.

This last clause is important in our province as far as Trans-Canada is concerned, because the privilege of selling is very much abused along certain sections of the Trans-Canada already built. Up to the present, however, the Trans-Canada highway in New Brunswick has not been designated as controlled limited access.

A few weeks ago there was held in Fredericton a Conference for the various planning commissions in the Province. Among the resolutions passed was one requesting the Department of Public Works to make Trans-Canada limited access wherever possible. This, I believe,

is an indication of the interest and concern that our planning commissions have in regard to development along this route.

Furthermore, I can say that this topic was recently discussed very briefly at a meeting of our Provincial Planning Board, the members of which expressed themselves as desirous of working in cooperation with the other Atlantic Provinces in drafting uniform regulations which would be submitted to our respective governments for approval and adoption.

There is, I think, a strong feeling in our Planning Branch and among the members of our Provincial Planning Board that the problem of controlling development along Trans-Canada must be tackled at once. As I stated previously, some of the development which has already taken place along that part of Trans-Canada already built is far from attractive or pleasing. This is a road that costs too much money to become another road along which we shall find anything from a shack to a good home.

Unless we begin to control development from the start, Trans-Canada will deteriorate because it will become flanked by a double row of hot-dog stands, gasoline stations, billboards, ice cream parlours and every other conceivable nuisance to distract the driver from the business of driving into the business of spending. In addition to traffic being impeded, the abutting land values in some places will certainly be lowered and a very bad impression will be created on the tourist. The resulting economic losses make it imperative that this situation be anticipated and prevented from springing up along this highway.

I do not think it sufficient to control development just within the limits of this highway or even within ten feet or so beyond the limits. I think that we should attempt to control development for one hundred and fifty feet or so beyond the limits on each side of the road.

One way to control all types of development would be for the government of the province concerned to acquire marginal land. By this, I mean for the government to acquire outright strips of land contiguous to, but outside the right-of-way and designate such strips as controlled. I believe that this system has been tried in some parts of the United States; I do not know if any of the provinces of Canada have tried it.

If the strips of land were wide enough, there would be complete control over roadside development that might be detrimental to the capacity, safety, and appearance of the highway. I doubt if the governments of the Atlantic Provinces would ever adopt such a scheme since we are poor provinces and Trans-Canada is a very costly road to construct. It could be argued, however, that since so much money will be invested in this highway, the government should invest a bit more to protect the large sum which will be invested.

Such an approach as this is probably not feasible in our provinces because the outright acquisition of marginal lands requires the outlay of public funds and the acquired lands would be removed from the municipal tax rolls. Of course, if the question of taxes were followed further, it could be argued that there would be an ultimate accretion in the value, perhaps far over and above that which was originally removed from the tax base. More taxes, rather than less, might be the eventual result. However, I feel most certain that in New Brunswick we would have great difficulty in convincing the municipalities of this and thus, it would probably be opposed very strongly by any municipality concerned. I suppose it could be argued further that in acquiring land for a right-of-way, it costs little more in most areas to acquire a strip of land on either side since it often costs little more to take a whole parcel of land rather than a portion of it.

The acquiring of marginal land in our province would be most difficult and I doubt very much if such a policy could be sold to the levels of government concerned.

SUGGESTIONS

That brings us to the question of what should be considered in the control of development along Trans-Canada. May it be clearly understood that I am no authority on this subject; but I do have some suggestions which I should like to make:

I. *There should be control of traffic access to the highway from abutting property.* This I have already mentioned in discussing the situation which has arisen in connection with other new roads recently built in our province. Great care must be taken in the design of subdivisions along this highway in order that several homes and even places of business may use one access instead of each one having a separate one. This will involve the construction of service roads and streets; but in my opinion, it is absolutely necessary. This will mean that the province must have some control over subdivision layout along this route, particularly in areas which have no local planning commission.

In New Brunswick we already have the authority under our Act to control subdivision outside of areas which have adopted the service of town planning and have adopted a local subdivision ordinance. All such regulations made are subject to the approval of the Lieutenant-Governor in Council. This would mean that we, on the provincial level, must keep in very close contact with all local commissions to request their support in subdivision control along Trans-Canada unless the provincial government decided to make Trans-Canada limited access in these areas also. This the planners of New Brunswick would support.

II. *Undoubtedly Trans-Canada will become a through highway for many people.* Thought should be given to the design and layout of picnic sites to be located along this route at various intervals. Tourist attractions should

also be considered. In the more barren areas consideration should be given to the possibility of planting trees.

III. *Some attempt must be made to regulate the control and type of roadside uses.* Perhaps we should give consideration to regulations respecting such uses as the following:

(1) *Building lines.* Regulations in this class would cover setbacks, rear yards and side yards. At the present time our province simply requires that all buildings and structures be located at least fifty feet from the centre-line of Trans-Canada. In other words, we permit building right up to the highway limit, since Trans-Canada has a right-of-way of one hundred feet in most areas of our province.

(2) *Lot Occupancy.* Some attempt should be made to regulate the lot occupancy, not only of residential buildings but also of commercial and industrial uses erected along Trans-Canada in order that adequate parking facilities will be provided and congestion will be kept to a minimum. As stated before it will be necessary for some group, either on the provincial or local level, to control size of lots and lot occupancy in subdivisions laid out along this road. Many people will wish to live close to this highway, probably not on it; others will want to live right beside this road. Consequently, there should be a fair demand for land along Trans-Canada. If there is no control over lot size for example, land will be sold off in very small lots and naturally frontages will be sold first and thus, ribbon development will be almost a certainty. This we must avoid if at all possible.

(3) Closely connected with lot size and lot occupancy will be *regulations controlling the height of buildings, area of floor space, and the exterior finish of buildings.*

(4) *The disposal of private sewage into the ditches of this road should not be permitted under any circumstances.* We have seen the result of this along many of our established highways in New Brunswick and I am sure that all authorities and the majority of the citizens earnestly desire to see this dangerous practice cease.

What will be the roadside uses which we should allow? I do not know for certain but I feel quite certain that there will be little objection to restaurants, ice cream parlours, gasoline stations, canteens, motels, and the like if they are set well back and if we control the design and the particular location. If this is done, many of the cheap and unsightly type will never be built. However, I emphasize again that any such regulations to control these must be implemented as soon as possible. Stringent regulations in regard to setback, size of lot, lot occupancy, parking facilities and design, should give the necessary control. Such regulations will definitely tend to restrict the number of such uses also.

Billboards and advertising signs have caused several departments of our government an endless amount of worry and concern. Probably they should be prohibited along Trans-Canada. However, we must be sensible and

Photo: National Film Board

Jemseg Flats Section of the Trans-Canada Highway in New Brunswick, 30 miles east of Fredericton.

above all realistic about these uses. Let us regulate the setback and the size of the sign. Moreover, the Department of Public Works should approve the exact location of the advertising sign. Frankly, I must admit that the problem of billboards and signs along many of our highways in New Brunswick is almost beyond control. At present the Provincial Planning Board is giving this problem serious thought. Needless to say that with no regulations for billboards and signs or with regulations not enforced, these uses will soon line Trans-Canada Highway.

At this point, I should like to make this very clear: we may have regulation after regulation but unless there is some efficient system of enforcement, we may as well forget about regulations. I have often thought that some government department must be charged with the responsibility of issuing permits for construction along Trans-Canada. However, any system of enforcement can be satisfactory only if all departments of government concerned will get together and decide who is responsible for the enforcement of each regulation. Since our regulations should probably extend beyond the highway limit for some distance, it may be questionable if we should expect our Department of Public Works to be responsible for the necessary enforcement. The addition of extra personnel to some department to make efficient administration a reality would, I should think, be money well invested. In the Province of New Brunswick our Tax Branch can be of tremendous help in enforcing all such regulations. I feel quite confident that our Provincial Planning Board, which is representative of all depart-

ments of government, will be able to work out satisfactory solutions for the efficient administration of any regulations which our Province might adopt. Moreover, I can assure the other Atlantic Provinces, in particular, that we are willing to discuss uniform regulations which might be adopted by all our governments.

Our task of implementing any system of control over roadside development will be made easier if we develop a continuing and vigorous program of public education. Any such program will have a far better chance of success if it is backed with strong public support. We must utilize all available media, including newspapers, radio and talks to representative groups. Each province might probably find it best to establish a public relations sub-committee, selecting if possible as chairman, someone with public relations experience. Many groups have an interest in this problem: for example, the Chambers of Commerce, Automobile Associations, Service Clubs and Unions of Municipalities.

I often think that an effective roadside program along any highway can be achieved: (1) if a balanced and well developed program is undertaken; (2) if both public and private agencies concerned with the problem work together; and (3) if where regulations have been enacted or agreed upon, strong support is given the government department or departments charged with the administration of such regulations. In my opinion, we may have more success in carrying out any program if we can stress the positives rather than the negatives. If we can get the interest and active support of private agencies and associations, we can stress the positive side of our program and thus, we should have a greater measure of success in accomplishing our aims.

We in the Province of New Brunswick have not done much work or given a great deal of thought to a program of controlling development along Trans-Canada in particular. On the other hand we have given much thought to highway development along all our main roads. We already have legislation which will permit the Provincial Planning Board to make regulations, subject to the approval of the Lieutenant-Governor in Council, to control highway development and subdivision of land in areas not under the jurisdiction of local planning commissions. Thus, it should not be difficult for us to make regulations in these respects since the legislation applies to all highways.

In closing may I make it very clear that many of the suggestions which I have made today are my own and not necessarily those of the New Brunswick Government nor of the Provincial Planning Board.

The main thing which we need is action on someone's part. Is it not logical that we, as planners, start the wheels rolling on a program which will give the Trans-Canada Highway the protection which it must have to serve its purpose effectively?

ROADSIDE DEVELOPMENT IN PRINCE EDWARD ISLAND

by G. Claude Smith, Director of Planning of P.E.I.

Early in 1954, the P.E.I. Division of the Community Planning Association of Canada discussed Roadside Beautification and how our Highways could be made more attractive. It had been necessary to remove many fine old trees so that roads could be widened, and no provision had been made for replacing them. Suggestions were made to the Government with the result that the Lieutenant-Governor-in-Council approved a policy that where any community would provide a sum of money for a roadside beautification demonstration, the Province would match such a sum up to one hundred dollars. So far nine communities have taken advantage of this grant. We hope and expect that next spring many more communities will plant trees and sow suitable grass along the roadsides of their district.

Our Provincial Planning Board has been interested in Regulations controlling building along our Trans-Canada Highway. This summer we prepared amendments to our Town Planning Regulations which have been approved by the Lieutenant-Governor-in-Council. Those Regulations apply to an area 300 feet each side of the centre line of the Trans-Canada Highway from Borden to Wood Islands, a distance of 86 miles. This stretch of highway is divided into two zones. Zone One is that area where the speed limit is not more than 30 per miles per hour. Zone Two is the remainder or where the speed limit is more than thirty miles per hour. The Regulations relate to the area of the lot, road frontage, the set-back from the road, side yards, parking space for business, to some extent the type of structure, sewer disposal, the removal of dilapidated buildings, the opening of roads and the placing of any structure on a lot.

Since we had several unsightly areas where shale or clay had been removed along the roadside, we put in an Amendment requiring that no person shall excavate sand, clay, gravel or shale of any kind without first obtaining a permit from the Minister.

The regulations affecting Zone Two of the highway are about the same as those for Zone One, except that we do not allow any building in this Zone nearer an intersection than 200 feet. I should like to see those Regulations extended to cover our main highways and built-up areas.

Should there not be uniform Regulations for the Trans-Canada Highway in each Province?

THE DESIGN OF HOUSING GROUPS AND URBAN SPACES —

The Problem of the Single Family House — Part Two

by Hugh Owen

The first part of Mr. Owen's article appeared in the September issue of the REVIEW.

Before discussing the design of groups of buildings, we must know the reasons why existing housing is ugly and monotonous. Let us start with an analysis of the design of rows of housing and the precepts governing design.

PRECEPTS OF DESIGN

1. The Form of Buildings

All buildings are formed of *planes*. The walls form vertical planes, and roofs usually form sloping planes. Where different planes meet each other, they form *lines*.

Where the walls or planes meet each other at corners, they form *vertical lines*. Vertical lines give a feeling of stability.

Where planes meet the ground and the eaves of the roof, they form *horizontal lines*. Horizontal lines are usually strong and dominant and give a feeling of repose.

In addition to horizontal and vertical lines, we have the *inclined lines* of roof planes at gables, hips and dormers.

Inclined lines give a feeling of *movement*. Where they are related, there is repetition; it becomes a pattern and the eye delights in recognizing a repeated form (*Fig. 14*). But where different angles are continuously introduced, there is no pattern and the result is a restless jumble of lines and direction (*Fig. 15*). The movement is confused and the eye does not come to rest.

Roof lines are the most important factor, because of the angle and because they are usually seen in silhouette against the sky. Because roofs are so conspicuous, the lines formed by the various roof planes are a fundamental part of design in a street layout. (*Fig. 16*). It is sad and unfortunate and very obvious that roofs are not considered at all in subdivision design even where an elaborate plan has been made. Because the roof is usually the largest and most dominant item, it is essential that all the roofs in a group should be related. (*Fig. 17*).

Buildings must not be thought of simply in elevation. Even if we drew the elevation of a street, it would not be a true picture—it would never be seen like that. We must remember that buildings have *mass* and that we move in and out, around and about and among them. We see them from different angles. And we see one building against another. Therefore, the building and the relation of one building to another must be considered from every angle.

The training of an architect is particularly useful in this aspect of design because he is taught to think in three dimensions.

Fig. 14

Fig. 15

Fig. 16

Fig. 17

Fig. 18

Fig. 19

Fig. 20

2. Relation and Diversity

Because our suburban building is generally single family dwellings, the range of design is extremely limited. This limitation is accentuated when whole subdivisions are composed of homes within a very narrow cost bracket (*Fig. 18*).

Monotony is caused by the endless repetition of a unit. There are no focal points to arrest attention. This is especially true on a long, straight street of a grid plan. (*Figs. 18, 19*). The result is the same even where there are short streets or curves because the same kind of house keeps on appearing and one street is just like another.

Setbacks usually fail to relieve monotony, partly because they are not deep enough to be noticeable, but mainly because the houses are not consciously grouped to accentuate the setback. Also, the *space* which is created by the setback is not used creatively as an element of design and we are not conscious of it (*Fig. 19*).

To avoid motonony, some subdivisions make every house different in some detail. Usually roof lines and pitches are varied and false gables and dormers are added. This is not successful because there is no relation between the units. There is no total effect. Each small building is in competition with the rest. The ultimate in variety is where every house is completely different and the result is chaos (*Fig. 15*).

It has been stated that monotony is caused by endless repetition which is not relieved by variety because no total effect is produced. In groups of houses, "the Variety of each must be dominated by the Harmony of the Whole".[1] Harmony does not mean monotony! There can be variety in detail but there must be a proper relationship between the parts.

[1]Sir Raymond Unwin: *Town Planning in Practice,* T. Fisher Unwin, London, 1909, page 360.

Formerly, unity and harmony were obtained by either uniform materials or a prevailing style of design, or both. This uniformity is seen best in Quebec and in some towns in Ontario such as Kingston and Perth. There, buildings, which may vary greatly in detail, do achieve unity and harmony through *uniform design* and *uniform materials*.

Today there is a multiplicity of both materials and designs of houses. Many builders, therefore, think only of individual houses with no consideration of the neighbouring structures.

Pattern books, including those put out by Central Mortgage and Housing Corporation, do not help by showing their designs as if placed on a 100′ lot, when the majority will be on lots 40′ to 50′ wide. Far from the splendid isolation illustrated, they end up in a row eight feet from an adjoining and probably unsympathetic design.

THE SCOPE OF DESIGN

1. The Limitation of Building Types

Unfortunately, most of our subdivision building is in small units on individual lots. These small pieces of ground, which are usually rectangles, strongly influence the siting of buildings in relation to each other so that it is impossible to exploit the buildings themselves to their full capabilities in the creation of space. Also the very sameness of the buildings adds to the difficulty of getting variety.

The picture would be very different if we had varied types of dwelling. If row houses and flats were mixed with standard houses, the resulting contrasts of mass together with the possibilities in the creation and use of space would add enormously to the interest and variety of neighbourhoods.

It is a pity that this is not done because the two bedroom house does not cater for all types and sizes of families. There are both single persons and childless couples of all ages, as well as families of different sizes. Flexible accommodation in a neighbourhood would keep them from moving away and would help to preserve the social unity of an area. The range of building forms which this could produce would increase enormously the range of town design.

2. The Possibilities of Building Groups

Limited as the range of building types is in the average subdivision, there is enormous scope for design by arranging them in groups. The possibilities have not begun to be exploited. These can only be realized if we cease to think of individual houses but consider them collectively as organized groups. These groups can be large or small, symmetrically placed about a straight road or asymmetrically arranged on a curve, but always considered for the total effect which they create together.

Also, it must be remembered that the space which a group forms must be used architecturally. Any grouping or massing of buildings is only completely successful if the space which is created by them is also designed *at the same time* as part of the whole.

DESIGN WITHIN THE GROUP

1. The General Layout

In general, the design of groups will aim at creating a recognizable space surrounded by ordered and related houses. The layout will depend partly upon the kind of space, large or small, that is wanted by the planner and partly upon the road layout, lot size and house types to be used.

Groups can be composed of one type of house, the character and identity of each group being formed by contrast in size, materials and landscaping between adjoining groups. Where two or more house types are used, one will be placed on the sides, with the second type forming the ends of the group. This contrast between the sides and the ends will help to establish the planes of the space.

2. Focal Points

According to the size of the group and the kinds of houses involved, the planner will have scope in forming minor focal points. These can be created by introducing the alternate house type or material (which has been used at the ends of the space) into the centre of the group forming the long side.

3. The Relation of Buildings to Each Other

On all but the most hilly sites, buildings look best when related to each other at right angles. This is especially true of flat sites. Odd-angled buildings look untidy because there is no relation between them (*Fig. 16*). There are, of course, rare exceptions to this, but they need the most skilful handling to be entirely successful; and they must be deliberately placed so that they create an easily recognizable effect. Usually, the two dimensional effect on plan looks well but unless the roofs are most carefully considered, the result will not be satisfactory.

The reason for this is that the buildings are only being considered in relation to each other *on plan*, and the three dimensional aspect of the space created by the buildings is not being consciously used as a design element. The best example of this is where corner houses are placed at an angle. They are not only unrelated to the adjoining buildings but they fail utterly in creating any kind of space about the intersection. Also, by leading the eye around the corner, they fail to bring the sequence of buildings to an end (*Fig. 20*).

4. Control

Control of design will be easier when dealing with a development for one builder. The kind of house and the range of materials will be known when the design is being prepared and, as the houses will all be built during one period, supervision will be possible.

It will be more difficult where lots are being sold only for individual development. It is customary, however, to have local by-laws governing the size and height of houses, setbacks and materials to be used. Such general control could easily be adapted to the idea of grouping. The main feature of the house which must be controlled in every case is the roof; its design and pitch must conform to the overall pattern.

The subdivision plan, therefore, would indicate not only the lot lines but the setback and location of the driveway (which would control the spacing and relation of houses); the storey height, roof lines and types of material.

5. Lot Size

The size of the lot affects the design of groups because it determines the distance between the units. Because the space between the buildings affects the rhythm or pattern, it is as important an element of design as the houses themselves. Generally, the width of the space should not exceed the width of the houses.

Usually, lots are a standard size but varying frontages are possible and desirable. They can be introduced at the ends of the groups or where focal points are formed.

6. Plan Types

Plan types must be chosen which are suitable to their location in the group.

The majority of house plans have the living room and front door facing the road and they can be used for the sides of the groups. But for those houses occupying the key positions at the ends of the group, great care must be taken in choosing suitable plans. The position of the front door, living room window and driveway, as well as the elevations, must be considered in relation to adjoining buildings.

7. Unity and Variety in Elevation

Theoretically, there is no limitation to the number of house types which can be employed in a group provided each house is sympathetic in design to the group. One storey, one-and-a-half and two storey houses can be used as long as the basic rules mentioned in the precepts of design are followed.

There are four fundamental requirements.

(1) The house must form a pattern or rhythm.
(2) Roof design and pitch must be related.
(3) Colour, pattern and texture of materials must be part of the design.
(4) The chief elements of the facades such as doors and windows must be related. This would be easier to accomplish if their design were based on a module.

8. Materials, Pattern, Texture and Colour

All our surfaces have colour and most of them have texture and pattern. They are an important part of design; they give life and vitality to our buildings, especially when there is a good contrast.

Materials have an important function in the design of groups and spaces. They can be used to emphasize the grouping when the same material, such as brick, is used only on the sides of the space and a contrasting colour and material, such as stucco, is used on the end buildings of the space. This difference in treatment between the sides and the ends of the group will also help to define the planes of the space.

9. Colour

When every house is of the same material, individual treatment can be given to the units by using a brilliant colour on some detail such as the door.

Gibberd advocates the use of white paint where possible. This will not only unite a row of buildings but it will accentuate any areas of colour on the individual units. This will be far more effective than if every house were to have a completely different colour scheme.

10. Garages

Garages can be used as an element in design to link the units in a group; but unless they are built at the same time as the house and of the same materials, they may be difficult to control. The problem is an important one, because garages can spoil a street scene through poor location, cheap materials or bad design. If they are not built with the house, one method would be to control the location, roof design and materials by a local by-law.

THE DIVERSITY OF GROUPS AND SPACES

1. Variation Between Groups

The importance of creating unity within each group and of establishing its individual character has been stressed. One method of doing this is by contrast between groups. Where the same house type is used throughout an area, contrast can be obtained by different sizes and layouts of groups and also by variations of material. Where there are two or more house types, there will naturally be greater scope in creating contrast.

2. Unity in a Neighbourhood

While it is desirable to create the identity of each group, it is equally desirable to establish the unity of a neighbourhood so that, as we pass from one group to another, we feel that we are still in the same area. This can be accomplished by using some factor of design which will form a regular and recognizable feature in each group, reappearing often enough to tie the neighbourhood together. This factor might be a house type or it could be some construction or design detail. It might also be a particular material which was used only on a key house in the group or a particular form of house grouping.

Landscaping will also be employed to establish the individuality of a group and both landscaping and road pattern will be used to create a sense of unity throughout a series of spaces which make up the neighbourhood.

These will be the subjects of the next installment.

Can we determine the relationship between the size of cities and the per capita cost of government? Mr. Gertler's modest approach to this important question was in the form of a talk given at the Edmonton Branch of the Community Planning Association of Canada in March 1955. Mr. Gertler, who is Director of Planning for the Edmonton District Planning Commission, was educated at the University of Toronto and McGill University. His study of the economics of redevelopment was summarized in the first volume of the REVIEW in 1951.

WHY CONTROL THE GROWTH OF CITIES?

by Leonard Gertler

I INTEND to express my views on the subject under discussion tonight as bluntly and as definitely as I can, but not in a dogmatic spirit. This is too important a question, it concerns too many of us, for it to be approached with a fixed attitude; and so I hope you will examine critically what I have to say.

In answering the question that has been posed tonight —why control the growth of cities?—I will deal with only one of the five major determinants of the quality of urban life, namely the size of cities in terms of population. The other four determinants are the shape of the built-up area, population density, structure of land uses and roads, and the internal pattern or subdivision layout. I am dealing with size because of its primary nature—in many ways the other factors vary with the size of the city—and because size relates to what I consider a central problem for all the young and growing centres of this continent, Edmonton included. The central problem as I see it, is this: How can we cultivate and preserve the intrinsic values of the city against the debasement that follows unlimited urban growth or agglomeration?

Underlying the formulations of this problem is a certain assumption about the purpose of city life, which Aristotle expressed a long time ago when he defined the city as "a society of people joined together with their families to live agreeably for the sake of having their lives as happy and as independent as possible—not for the purpose of men's merely living together, but for their living as men ought".

This definition does of course beg a question: how ought men to live? Well, every age creates its own values. In our industrial cities we can identify certain characteristic conditions of life. These conditions, of course, are evident to all, but I wish to re-state them briefly so that we may have a common understanding of the things we're trying to preserve.

HUMAN EFFECTS OF URBAN GROWTH

The growth of cities must be correlated with two other closely connected elements of our civilization, namely the rising employment of machine power and the enlargement of leisure which it has made possible. On the one hand, the urban working man through greater productivity and through collective bargaining has achieved a shorter working day and a shorter working week. On the other hand, the concentration of population and wealth in cities creates great opportunity for the enjoyment of expanding leisure time, through facilities which are the best that society can produce. Further, as cities grow, the division of labor is extended; occupations, professions and interests multiply. There are unique opportunities for specialized contacts, which in turn raise human endeavour to a higher level. The achievements of theoretical and applied science, for example, are almost entirely urban products.

These then are the urban virtues. They are the products of growth but do not expand with unlimited growth. In fact there is much to suggest in the history of cities that beyond a certain point of growth, a reverse process sets in, and the urban values are turned into their opposite. We know that generally speaking, the larger the city, the longer will be the journey to work. Leisure time gained in the factory is lost on the way home. And for the same reason—the increasing time lost and annoyance of getting around—the superior facilities for the enjoyment of leisure time which grow up at the centre become inaccessible to the average man, and opportunities for diverse and specialized human contacts centering around vocation, trade unions, church, hobby or just intellectual interests—become limited when families settle into one far-flung suburban ghetto or another, in accordance with their income and social status. Diversity turns into uniformity.

At the extreme of the very large city we get the phenomenon identified by the French sociologist Emile Durkheim as *anomie*, the phenomenon of individual man feeling all alone in a crowd or in a congested tenement, crushed under the weight of a soul-destroying impersonality.

These penalties of growth spell the breakdown of community life and to top it all off the citizen has to pay more for services which render him a declining satisfaction. The phenomenon I have described is not basically an issue of good or bad planning. Within certain limits efficient administration and planning can stave off the process of deterioration. But finally, as Holmes Perkins has pointed out in his essay on the Regional City, "the simple geometry of the plan will surely defeat us. The area available as we approach a centre shrinks as the square of the distance". Every extension of the urban fringe is reflected in a greatly intensified demand for traffic and parking space in the centre, which, inherently, is spatially limited. The breakdown of the transportation system appears to be a function of size and not basically mismanagement or mechanical failure.

FINANCIAL COSTS OF URBAN GROWTH

The foregoing observations lead me to believe that there is on this continent at least, and in our type of society, a characteristic process of city growth which can be expressed as a law of urban development. I have not been able to muster sufficient evidence to establish every manifestation of this law. But I have given some attention, in the course of my work, to the subject of municipal costs, and so I will confine my description of the law to those terms.

The accumulated experience of city growth suggests a constant relationship between the size of an urban centre and the per capita cost of government. In the early stages of growth a decline in costs is inherent in the nature of local investments. Sewer and water systems, for example, are always designed for anticipated demand in excess of present demand. When growth occurs and there are more customers using the existing systems, the per capita cost of operation will go down. But there comes a time in the development of all urban communities when this no longer holds true. The sewage systems may be forced into less desirable areas where costly pumping is necessary. To guard against stream pollution, secondary treatment may become imperative. The community may have to increase the capacity of the water treatment plant, or to build reservoirs to maintain an adequate water pressure. More durable and expensive pavement may be required. Traffic congestion may multiply passenger-mile costs of the transit systems. And, above all, there will be a rise in the cost of administration. Size means complexity and organization, more expert and more costly staff. A point may be reached where, in spite of the best efforts of all, decreased unit costs in some utilities and services are offset by increased costs of administration, by the effects of congestion, and by the burden of extra capital investment. That point will be different for every community, depending on local costs of labor and materials and on internal efficiency, but every community is inevitably faced with this problem.

STATISTICAL EVIDENCE: U.S.A. AND CANADA

Now what statistical evidence have we for this so-called law of urban development? Well, I have two sets of figures, one American and one Canadian, which are highly suggestive, and each shows how the per capita cost of government varies as the size of the city varies. If the cost curves for each set are plotted, they show the same general characteristics – a movement upwards, broken by plateaus where costs stabilize within certain population ranges, and then jump drastically upwards until a new plateau is reached.

The American figures, derived from the U.S. Census and covering all cities from 25,000 to 1,000,000 show the big jump after a population of half a million. As cities increase above 250,000 towards 500,000, the average increase in per capita cost of government is 3.1%; but as they go beyond 500,000 to 1,000,000, the average increase in per capita cost of government is 51%.

The Canadian figures, which cover all cities, towns and villages in Ontario, with populations in excess of 6,000, show the following jumps: as population increases from 7,500 to 10,000, per capita costs increase by 8%; from 10,000 to 17,000–2%; 17,000 to 35,000–20%; 35,000 to 55,000–4%; 95,000 to 225,000–20%; and finally the city of Toronto with a population of about 670,000 has a per capita cost of government 20% higher than that of the next largest city of 225,000 people.

These figures, as I have said, are suggestive and not conclusive. To definitely establish that per capita costs of government rise with the rise in population of cities, one would have to undertake on-the-spot investigations to determine the extent to which changes in the cost of government are due to differences in the quality and range of services offered at the different population levels. This would no doubt be an offsetting factor at the lower population ranges, where capital and revenue limitations will make for substantial variations in services, as we move from one population level to the next. But what we know about the real conditions which lie behind rising municipal costs, convinces me that the characteristic relationship between cost and size of city does not simply reflect differences in the quality of services.

STATISTICAL EVIDENCE: EDMONTON REGION

A few examples from the local scene will illustrate my point. It is no secret that provincial health authorities informed City Council some time ago to the effect that pollution of the North Saskatchewan River would reach a critical point when there are 220,000 persons in the Edmonton area. The Provincial Board of Health had

Fort Saskatchewan, Alberta, 1953.

Airview Photo: Edmonton

established certain minimum standards for the river at a point where it passes the Town of Fort Saskatchewan. The standards pertain to bacteria and oxygen content, to control of grease and floating materials. A certain maximum bacterial index was established which would make possible the treatment of river water at Fort Saskatchewan by means of a common and economic type of water treatment plant. Up to 220,000 people, Edmonton's old primary sewage treatment facilities to which there had not been a major extension since 1931 would suffice. Beyond 220,000 people the city would have to add considerable secondary treatment facilities if the minimum standard were to be maintained. It has since been made public that to meet these requirements, the city will undertake an investment of $6,000,000 for plants and connecting mains, which will cost the taxpayers about $600,000 per year in debt charges and operating expenses.

My point here is that essential and inescapable as the new investments are, we cannot say that the man in the subdivision has thereby gained a service which he didn't have before. The extra cost is one of the burdens of sheer size.

The economics of the transit system also reveals the forces behind the rising municipal cost curve. Up to a point, increased population density, by facilitating a better load pattern reduces costs per passenger-mile, but a point is reached where increased density produces traffic congestion, stalls transit vehicles, and costs per passenger-mile go up. Can we say in these circumstances that the people who are paying more are better served? Obviously not, they are paying the price of bigness.

NEED FOR A STRATEGY OF GROWTH

Statistical evidence such as I have presented and my observations of the conditions which lie behind the evidence create a strong presumption in my mind that there is a characteristic process of city growth which goes in the direction of intensifying problems of traffic, parking, housing congestion and municipal finance. And it is this situation, in turn, which leads me to believe that absolutely central to a plan for any area of expanding urban population, there must be an overall strategy of growth, to be achieved, in the main, by the ordinary instruments of subdivision, zoning and development controls, exercised over a whole region.

Now I do not know how you regard this issue, but I do know that this is an idea to which there is a considerable resistance amongst all kinds of people. Sometimes the resistance is founded on vested interest in fringe lands, of people who believe they have an inalienable right to speculative gain, no matter what the effects on the community. But it is really a more general resistance which is expressed in two typical attitudes, the first a fallacy and the second a misconception.

The first attitude is "What can we do? the city just grows; look at Toronto; and anyway, we have to be practical". This is a call to the abdication of human intelligence. It implies that we cannot learn instructive lessons from the past but must merely go on blindly repeating the errors of the past.

This, I believe, is a particularly fatal attitude to adopt in a country like Canada, which has really just left the

pioneer stage of development when, understandably, men and women were preoccupied more with making a living than living.

I was very interested to discover a concern with this kind of attitude in a report of the Commission of Conservation of Canada, published 38 years ago, in 1917.

> "The necessarily crude methods of the pioneer stage of development and civilization still prevail. Getting results still counts more with some men than getting the right results in the most efficient and economic way. We lay out towns, construct buildings, roads and bridges on the theory that getting things done quickly is more important than getting things done efficiently and well. . . . To those who hold fast to the theories that nothing is practical that has not been tried by experience, that immediately tangible results must be obtained whatever the outcome, that preliminary financial success must be secured whatever the ultimate effect,—it is possible that many of the lessons of recent years will be lost, and that sound schemes will be dismissed as visionary and impractical."

I do not wish to labour this point nor to imply that we have not moved forward from 1917. It is simply my purpose to point out that there is a lingering fatalism about regulating city growth and that if this fatalism is allowed to predominate it will lead to the neglect of one of the major factors determining what taxes you and I will have to pay and what time we will have to get up in the morning to go to work.

A MISCONCEPTION

The second attitude, "You can't stop growth, or alternatively, you can't stop industry", stems from a misconception. The conclusion which some of us have drawn from the history of city development is that, if our aim is to achieve economy and satisfactory living conditions, we must attempt to work out and implement a general strategy for the growth of urban population. And there is no formula which can be applied mechanically to every situation. The pattern of growth for each centre has to emerge out of the specific conditions of each centre; and the solution has to be consistent with the realization of the fullest potential of industry. In this area, we have formulated, and are applying a decentralized, regional pattern of growth because there appear to be possibilities of industrial growth in outlying areas within a radius of 20 miles from Edmonton. And there are some signs that it is working out. Within a year of our general plan report for the Town of Fort Saskatchewan, in which we first formulated the town's possibilities as a satellite, two large industries bought land, and they have commenced construction. In St. Albert, a plywood plant has been established; at Wabamun, a major power plant. Our general plan study of Leduc reveals certain light industry possibilities, and so on.

INDUSTRIAL ECONOMY AND MUNICIPAL ECONOMY

There are, in fact, some signs that what we propose, far from stopping industry, is entirely in line with the most advanced thinking of industrialists themselves. In the columns of the *Financial Post*, for example, I find this interesting report:

> "Location of a new $2 million Fiberglass Canada Ltd. plant at Guelph, Ontario, is part of a general trend to decentralization of industry to smaller communities, according to General Manager, T. A. Fisher."

Now officially open, the new plant houses the textile division, transferred from Oshawa and expanded. Guelph was chosen because "such communities offer better facilities, factory sites, and the greater personal interest which come from community spirit not found in larger centres," says Mr. Fisher.

If Mr. Fisher is right our plan may be regarded as an attempt to put up a few directional signs to guide these natural decentralizing tendencies. And the conflict between the industrial economy and municipal economy becomes imaginary. There is a sense in which the interests of industry and municipal economy merge. Industry has spent millions to perfect automatic and continuous flow processes of production for the purpose of improving efficiency and lowering the unit costs of production in the plant, only to find these gains offset outside the plant in the wastes of transportation. The stalling of truck traffic in Montreal, for example, represented in 1952, according to an estimate of C.-E. Campeau, Master Plan Engineer, a loss of $30,000,000. This is another cost of sheer size which, objectively, gives industry an interest in trying to maintain optimum growth—although the individual industrialist does not always believe this.

Returning to our central theme, I have tried to suggest why concern with patterns of growth, and the size of the central city in a regional complex, is necessary if we are to maintain a decent urban environment. I wish to leave you with this concluding thought: I suggest to you that if we are able to carry out our particular strategy for growth and can maintain an optimum size, we will be laying the conditions not only for preserving the good qualities of our city, but for improving them. For, as the optimum of the centre is approached, and population is distributed throughout the region, the demands for roads and sewer and water lines in new areas will decline; and the city consequently will accumulate capital or borrowing power, which would be available for the improvement of conditions in the older areas. And then we can turn our attention to redeveloping some of our blighted and congested areas, to developing our river banks and ravine parks, to completing our Civic Centre, and to all those things which raise city life to a higher pitch of human satisfaction.

Résumé du discours de M. Gertler

Signalant que ses conclusions ne sont pas définitives, parce qu'on ne dispose pas de preuves suffisantes, M. Gertler se demande s'il ne serait pas économiquement désavantageux pour nos villes de grandir au-delà de certaines dimensions données. Au moyen de deux séries de chiffres, l'une d'origine américaine et l'autre, d'origine canadienne, il montre comment, dans chaque cas, les frais d'administration par habitant varient selon que la population est plus ou moins forte. Il cite aussi en exemple la région d'Edmonton, en vue de démontrer que les frais qu'entraînent le traitement et l'épuration des matières d'égout s'accroissent proportionnellement au nombre des habitants au fur et à mesure que s'étend la région urbaine. Les frais supplémentaires constituent l'un des fardeaux que doit porter le contribuable par suite de l'importance de la métropole, sans qu'il soit question de l'amélioration des services.

Voici la traduction de quelques alinéas tirés de l'exposé de M. Gertler:

Aux premières étapes de la croissance, il est entendu que le coût des améliorations locales sera moins élevé. Les systèmes d'égout et d'adduction d'eau, par exemple, sont toujours aménagés de façon à satisfaire une demande eventuelle plus grande. Quand la population augmente et que plus de clients utilisent les systèmes actuels, le coût d'exploitation par tête diminue. Mais vient un moment où il n'en est plus ainsi dans le cas de toute ville qui prend de l'expansion. Il se peut qu'il faille installer des égouts dans des régions moins propices, où il faudra recourir à un pompage qui coûte cher. Pour prévenir la pollution des cours d'eau, on sera peut-être contraint de procéder au traitement secondaire des matières d'égout. Il se peut que la ville doive accroître la capacité de son usine de traitement des eaux ou aménager des réservoirs destinés à maintenir une pression convenable de l'eau. Peut-être faudra-t-il poser une chaussée plus durable et plus coûteuse. Le coût de transport par passager par mille sera peut-être multiplié par suite des encombrements de circulation. Par-dessus tout, il se produira une augmentation des frais administratifs. L'étendue signifie la nécessité de l'organisation et les situations complexes, un personnel plus spécialisé et donc mieux rémunéré. On peut en venir à un point où, malgré les meilleurs efforts de tout le monde, la diminution du coût de revient par unité de certains services d'utilité publique se trouve contrebalancée par l'augmentation des frais administratifs, par les conséquences de l'encombrement de la circulation et par le fardeau que comporte les mises de fonds supplémentaires. Le moment où cela se produira diffère d'une ville à l'autre, selon le coût de la main-d'œuvre et des matériaux dans chaque ville et selon l'efficacité administrative; mais c'est un problème auquel toute ville doit inévitablement faire face.

L'économie du réseau de transport indique aussi quelles sont les causes de la courbe ascendante des frais municipaux. Une population plus dense réduit jusqu'à un certain point le coût du transport par passager par mille, parce qu'il y a plus de monde à transporter; mais vient le moment où la densité de la population amène l'encombrement de la circulation, gêne le mouvement des moyens de transport et il en résulte une augmentation des frais par passager par mille. Peut-on dire, dans ce cas-là, que ceux qui payent plus cher obtiennent un meilleur service? Assurément non: ils acquittent la rançon de la grandeur.

Des preuves statistiques comme celles que j'ai présentées et ce que j'ai dit à propos de la situation qui tient à un état de choses dont la preuve est faite nous permettent assurément de présumer, selon moi, qu'il y a une façon de laisser grandir les villes qui tend à intensifier les problèmes relatifs à la circulation, au stationnement, à l'encombrement des logements et au financement des municipalités. Et voilà pourquoi, en revanche, je suis porté à croire qu'il faut absolument, à l'égard de toute région urbaine dont la population s'accroît, qu'existe une stratégie d'ensemble visant l'accroissement, à réaliser surtout par le recours aux moyens ordinaires qui se ramènent à la réglementation appliquée à la subdivision, à l'établissement de zones et à la mise en valeur dans toute la région.

. . . L'ordonnance de l'accroissement urbain comporte un fatalisme chronique. Si on permet à ce fatalisme de prendre le dessus, il en viendra à faire négliger l'un des principaux éléments qui servent à établir quels impôts il nous faudra acquitter et à quelle heure il nous faudra nous lever le matin pour aller au travail.

. . . . Nous devons tâcher de mettre au point et d'appliquer une stratégie générale en ce qui a trait à l'accroissement de la population urbaine. Dans aucun cas, il n'y a de formule toute faite. La façon dont doit se produire l'accroissement sera commandée par les conditions propres à chaque localité et la solution adoptée doit être conforme autant que possible aux nécessités futures de l'industrie. Dans la région d'Edmonton, nous avons adopté et appliquons un programme régional de croissance décentralisé, parce qu'il semble possible que le développement industriel se fasse dans la banlieue, dans un rayon de 20 milles de la ville. Des indices portent à croire que cela se réalise. Dans moins d'un an depuis la présentation de notre rapport visant le programme général pour la ville de Fort-Saskatchewan (nous avons, pour la première fois, mentionné dans ce rapport que la ville pouvait devenir satellite), deux industries importantes ont acheté des terrains dans cette ville et commencé à construire. Une usine de bois contreplaqué s'est établie à Saint-Albert et une puissante centrale d'énergie, à Wabamun. L'étude de notre programme d'ensemble relatif à Leduc indique qu'il serait possible d'y installer des industries légères.

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